



**Diagnostic  
BioSystems**

2020–2021 Anatomic Pathology Catalog



**Advanced Tissue Diagnostics**

**Trusted Solutions**

# Saving Lives

# Improving Health

## Our Mission

Diagnostic BioSystems' focus is to provide high quality primary antibodies, detection chemistries, and a wide range of ancillaries and chromogens, complemented with automated IHC Stainers and backed by exceptional customer service and technical support. DBS has more than twenty years of experience in IHC assay development to help pathologists solve their most difficult diagnostic clinical questions.

## What We Do

Diagnostic BioSystems' main focus is to provide high quality primary antibodies, detection chemistries, and a wide range of ancillaries and chromogens, backed by exceptional customer service and technical support. DBS has more than twenty years of experience in IHC assay development to help pathologists solve their most difficult diagnostic clinical questions.

## Manufacturing Accreditations

Diagnostic BioSystems maintains the highest quality standards and is committed to customer service and support. This commitment is built on a quality system foundation.

Diagnostic BioSystems is an FDA registered medical device manufacturer, operating under FDA 21CFR Part820 Quality System Regulations and is a California Department of Public Health (CDPH) licensed Medical Device Manufacturing facility.

Our facility is also ISO 13485:2016 Certified meeting Quality Management System International Standards. We manufacture IVD/CE marked medical devices for use in the European market.



Catalog Price: \$3.00 US  
Catalog Item No: GMP-M-0008-F



# Table of Contents

<b>Antibodies</b>	<b>2</b>
Featured Antibodies	3
Primary Antibodies	4
<b>MOH DAB Kit</b>	<b>80</b>
<b>FITC Antibodies</b>	<b>82</b>
FITC Conjugated Antibodies	82
CF™ 488 FITC Antibodies	84
<b>Detection Systems</b>	<b>87</b>
Polymer Based Detection Systems	88
PolyVue Plus™ Two Step Detection System	88
UnoVue Plus™ One Step Detection System	89
UnoVue Plus™ Detection Components	89
Streptavidin Biotin Based Detection Systems	90
<b>Chromogens</b>	<b>91</b>
Chromogens for AP	92
Chromogens for HRP	93
<b>Antigen Retrieval</b>	<b>96</b>
Antigen Retrieval Solutions	96
Montage Opus Antigen Retrieval System	98
<b>Ancillary Reagents</b>	<b>99</b>
ImmunoHisto-Sealer	99
Blockers	101
Chromogen Enhancers	101
Buffers	102
Mounting Media	102
<b>Special Stains</b>	<b>103</b>
<b>Index</b>	
I. Product	109
II. Catalog Number	110
<b>Distributors</b>	<b>inside back</b>
<b>Ordering Information</b>	<b>outside back</b>

## Catalog Quickguide

Find products easily by using this table of contents to identify the relevant product area (Antibody, Detection System etc.) and go to the corresponding page number for the product area. Each section is color coded for ease of use with products listed alphabetically within the section. Products can also be found by using the product index by name in the back of the catalog.

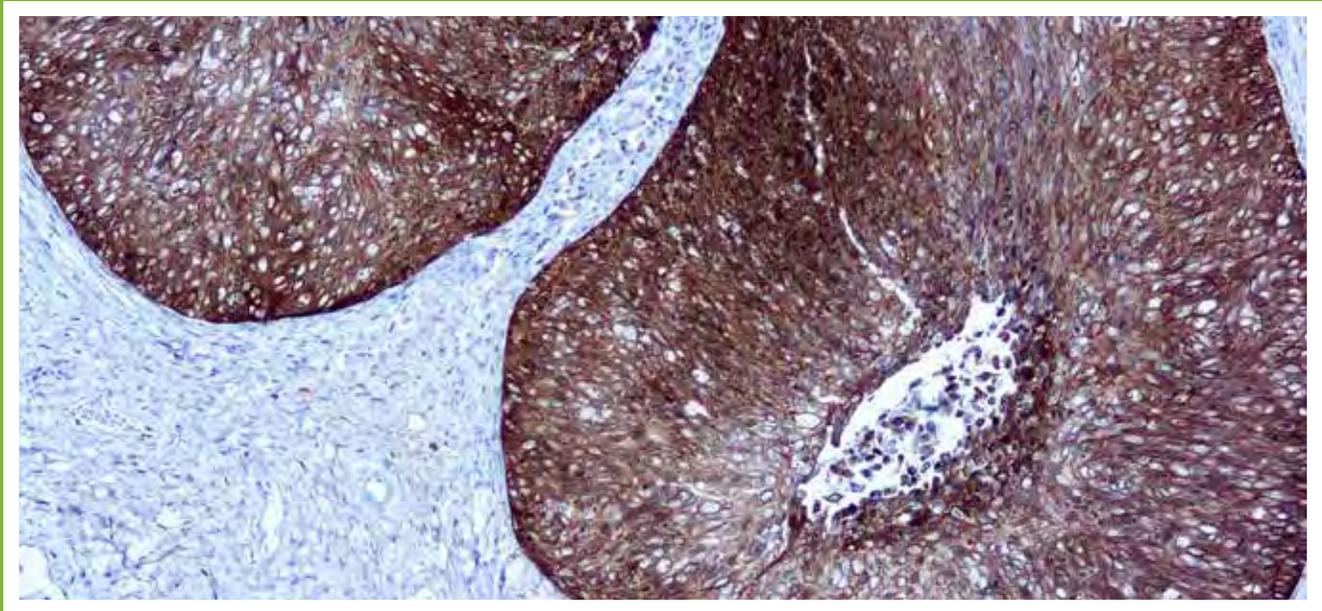
All products are noted with their regulatory designation:

**IVD** In Vitro Diagnostic Use

**RUO** Research Use Only

# Primary Antibodies

Diagnostic BioSystems offers a range of ready-to-use and concentrated antibodies optimized to provide high quality staining when used for immunohistochemical applications. Our rabbit monoclonal antibodies are also available for enhanced specificity and sharp signal.



P16 is a mitotic inhibitor protein. It competes with D-type cyclins to bind to cdk4 and cdk6. It acts as tumor suppressor and inhibits the progression of cells through the G1 phase of the cell cycle.

## FORMAT AND PACK SIZE:

**Concentrated Antibodies:** Designed for individuals who want to have more flexibility in their immunostaining protocols. Each antibody is thoroughly quality control tested to cGMP standards. A recommended dilution factor is provided with each antibody.

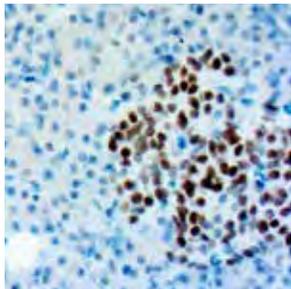
**Pack Size:** Concentrated antibodies are available in 0.1ml, 0.5ml and 1ml vials.

**Prediluted Antibodies:** These antibodies have been quality control tested and require no further dilution or titration.

**Pack Size:** Prediluted antibodies are available in 6ml and 25ml vials.

# Featured Antibodies

New antibodies developed by Diagnostic BioSystems go through a rigorous development process to ensure the laboratory is provided the right tools for a highly technical, ever changing job. Our products and procedures are validated to the ISO 13485 medical device standard, ensuring lot-to-lot reliability and performance. At Diagnostic BioSystems, we take pride in the quality of our primary antibodies and stand by every product that is shipped from our facility to perform at the highest level of customer satisfaction.

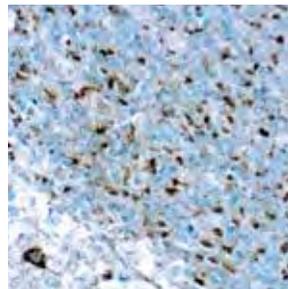


INSM1

**INSM1** (page 51)

IVD

INSM1 (insulinoma-associated protein 1), also known as zinc-finger protein IA-1, is a developmentally regulated zinc finger transcription factor. It localizes to the nucleus and is expressed in embryonic tissues undergoing neuroendocrine differentiation. It plays an important role in neuroendocrine development and is required for normal differentiation of pancreatic endocrine cells.

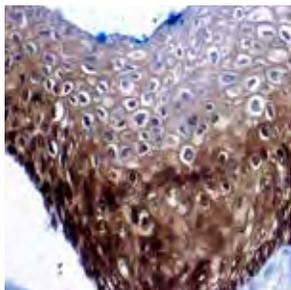


Pan-TRK

**Pan-TRK** (page 65)

IVD

Pan-TRK IHC is a time- and tissue-efficient screen for NTRK fusions, particularly in driver-negative advanced malignancies and potential cases of secretory carcinoma and congenital fibrosarcoma. Pan-TRK IHC can help determine whether translation occurs for novel NTRK rearrangements.



p16 Clone JC2

**p16 Clone JC2** (page 62)

IVD

p16 is a tumor suppressor protein that is a cyclin-dependent kinase inhibitor and is essential in regulating the cell cycle. p16 overexpression is a surrogate biomarker of HPV infection (in particular high-risk HPV types), which makes it useful in evaluating HPV-associated squamous and glandular neoplasia of the lower gynecologic tract.

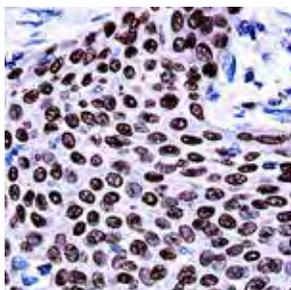


Smad4

**Smad4** (page 73)

IVD

SMADs are members of the MAD-related family of molecules. Alterations in the SMAD4 gene was primarily discovered in pancreatic cancer (duct adenocarcinoma) but occur in a variety of cancers such as colorectal cancer, gastric cancer, etc... it higher frequencies in gastrointestinal tract cancers. Loss of SMAD4 expression in tumors has also been shown to affect cancer progression and therapy, such as reduced response to adjuvant chemotherapy.

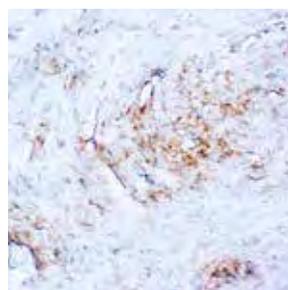


p63

**p63** (page 64)

IVD

p63 is a homolog of the tumor suppressor p53. It is identified in basal cells in the epithelial layers of a variety of tissues, including epidermis, cervix, urothelium, breast and prostate. p63 has also been shown to be a sensitive marker for Lung Squamous Cell Carcinoma (SqCC), with a sensitivity of ~90%. In breast tissue, p63 has been identified in myoepithelial cells of normal ducts.



Treponema Pallidum

**Treponema Pallidum** (page 77)

IVD

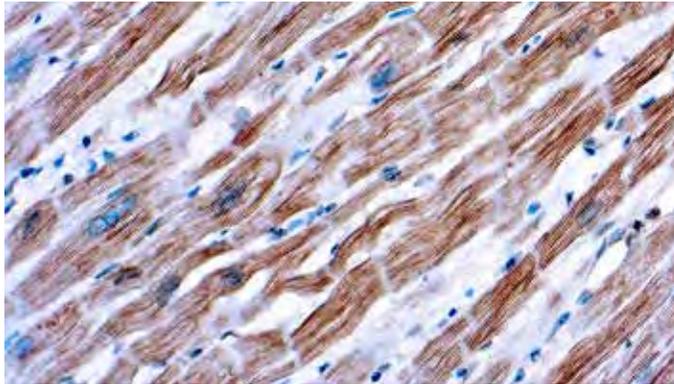
Treponema pallidum is the causative agent of syphilis. It is a gram negative spirochete, a helical to sinusoidal bacterium with outer and cytoplasmic membranes, a thin peptidoglycan layer, and periplasmic flagella.

# Primary Antibodies

## $\alpha$ -Actinin, Sarcomeric

Clone: EA-53

Catalog No.: Mob227 Concentrated



Formalin fixed paraffin embedded human skeletal muscle stained with  $\alpha$ -Actinin, Sarcomeric antibody (Mob227).

**Immunogen:** Purified rabbit skeletal  $\alpha$ -actinin.

**Isotype:** IgG1

**Positive Control:** Skeletal muscle

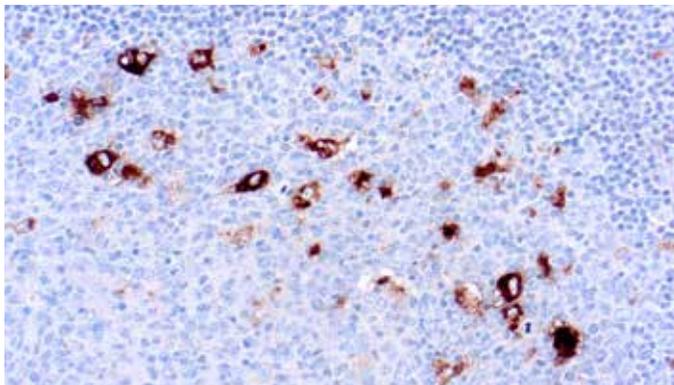
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific for  $\alpha$ -skeletal muscle actinin and  $\alpha$ -cardiac actinin. It stains Z lines and dots in stress fibers of myotubes in skeletal and cardiac muscle but not in non-sarcomeric muscle elements.

## $\alpha$ -1-Antichymotrypsin

Catalog No.: RP047 Concentrated

PDR023 Prediluted



Formalin fixed paraffin embedded human tonsil stained with  $\alpha$ -1-Antichymotrypsin antibody (RP047).

**Immunogen:**  $\alpha$ -1-antichymotrypsin isolated from human serum.

**Positive Control:** Tonsil

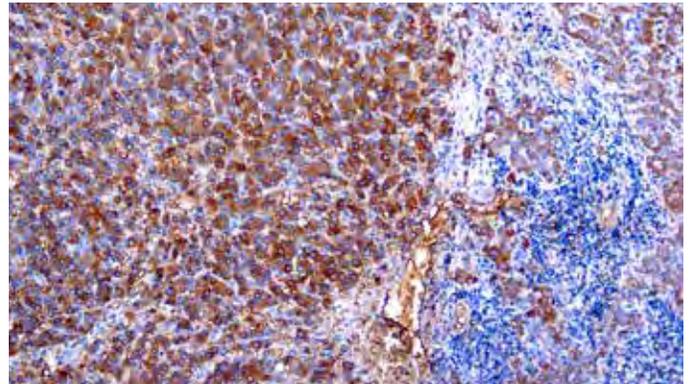
**Cellular Localization:** Cytoplasmic

**Specificity:** The antibody is specific against human  $\alpha$ -1-antichymotrypsin. This antibody stains monocytes and macrophages in human tissues and does not stain any other cell type.

## $\alpha$ -1-Antitrypsin

Catalog No.: RP048 Concentrated

PDR021 Prediluted



Formalin fixed paraffin embedded human hepatosarcoma stained with  $\alpha$ -1-Antitrypsin antibody (RP048).

**Immunogen:**  $\alpha$ -1-antitrypsin isolated from human serum.

**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

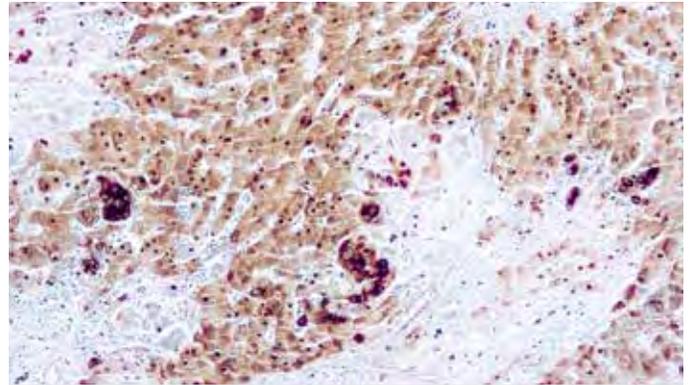
**Specificity:** The antibody is specific against human  $\alpha$ -1-antitrypsin. This antibody stains macrophages in human tissues and does not stain any other cell type.

## $\alpha$ -Fetoprotein (AFP)

Clone: C3

Catalog No.: Mob129 Concentrated

PDM057 Prediluted



Formalin fixed paraffin embedded hepatocellular carcinoma stained with  $\alpha$ -Fetoprotein antibody (Mob129).

**Immunogen:** BALB/C mice were injected with purified human  $\alpha$ -fetoprotein.

**Isotype:** IgG2a

**Positive Control:** Fetal liver

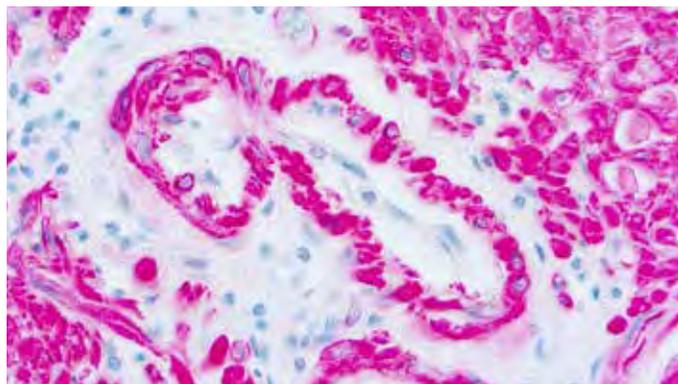
**Cellular Localization:** Cytoplasmic

**Specificity:**  $\alpha$ -fetoprotein (AFP) is a single chain glycoprotein of 70 kDa that is normally expressed in the fetal liver, gastrointestinal tract and yolk sac. This antibody recognizes an epitope of  $\alpha$ -fetoprotein present in human and several other species.

## Actin, $\alpha$ -Smooth Muscle

Clone: 1A4

Catalog No.: Mob001 Concentrated  
PDM003 Prediluted



Formalin fixed paraffin embedded human large intestine stained with Actin, Smooth Muscle antibody (Mob001).

**Immunogen:** BALB/C mice were injected with N-terminal decapeptide of  $\alpha$ -smooth muscle actin.

**Isotype:** IgG2a, kappa

**Positive Control:** Leiomyoma, Colon

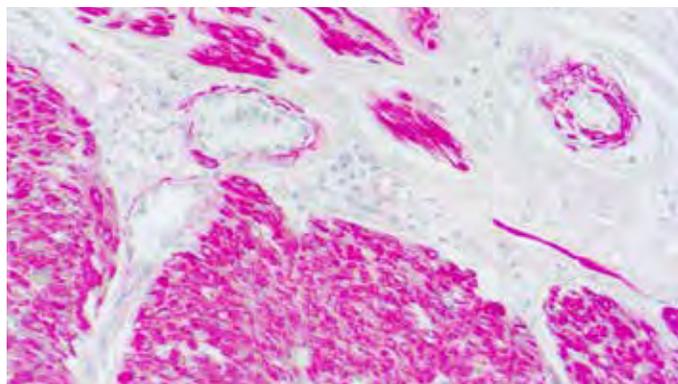
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to  $\alpha$ -smooth muscle isoform of actin. It reacts with smooth muscle cells of vessels and different parenchymes. This antibody does not cross-react with  $\beta$  and  $\gamma$ -cytoplasmic,  $\alpha$ -sarcomeric and  $\alpha$ -myocardial actin isoforms.

## Actin, Muscle Specific

Clone: HHF35

Catalog No.: Mob002 Concentrated  
PDM002 Prediluted



Formalin fixed paraffin embedded human large intestine stained with Actin, Muscle Specific antibody (Mob002).

**Immunogen:** BALB/C mice were injected with SDS extracted protein from human myocardium.

**Isotype:** IgG1, kappa

**Positive Control:** Skeletal muscle

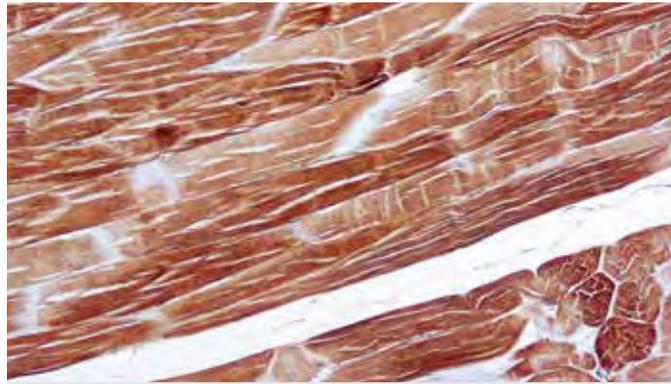
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to  $\alpha$  and  $\gamma$  specific actin isomers from skeletal, cardiac and smooth muscle but does not recognize  $\beta$  and nonsmooth muscle  $\gamma$  actin isomers.

## Actin, Sarcomeric

Clone: 5C5

Catalog No.: Mob128 Concentrated  
PDM099 Prediluted



Formalin fixed paraffin embedded human skeletal muscle stained with Actin, Sarcomeric antibody (Mob128).

**Immunogen:** BALB/C mice were injected with purified rabbit striated muscle actin.

**Isotype:** IgM

**Positive Control:** Skeletal muscle

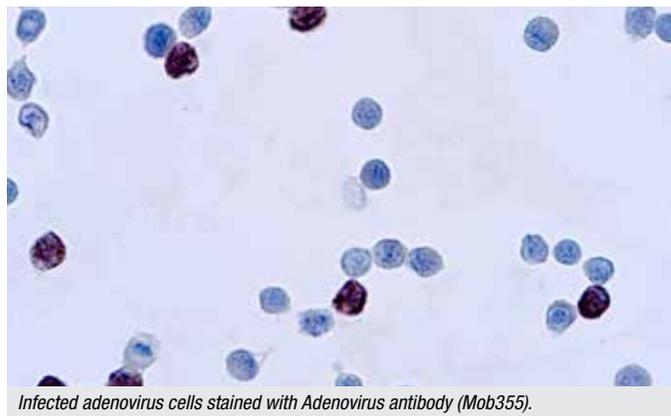
**Cellular Localization:** Cytoplasmic

**Specificity:** Monoclonal anti- $\alpha$ -sarcomeric actin has been used as a marker for rhabdomyosarcoma. This antibody is specific to  $\alpha$ -skeletal and  $\alpha$ -cardiac muscle actins. It does not react with smooth muscle tissue.

## Adenovirus

Clone: M58 + M73

Catalog No.: Mob355 Concentrated



Infected adenovirus cells stained with Adenovirus antibody (Mob355).

**Immunogen:** BALB/C mice were injected with adenovirus.

**Isotype:** M58, IgG2a, kappa; M73, IgG2a, kappa

**Positive Control:** Adenovirus infected tissue

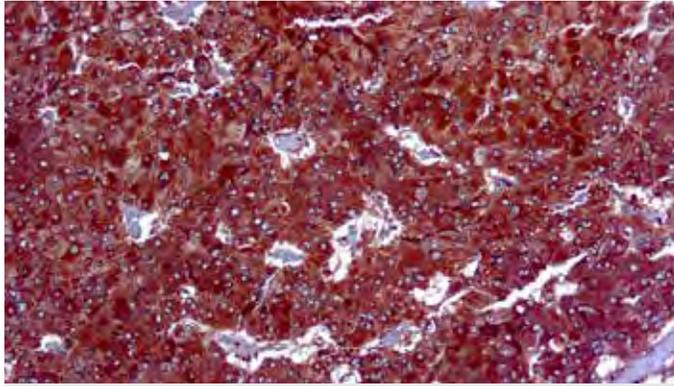
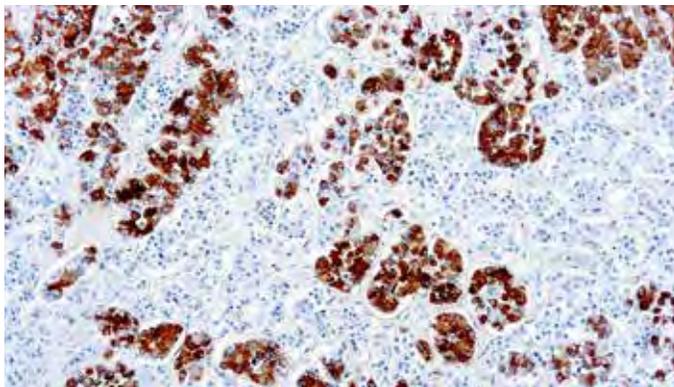
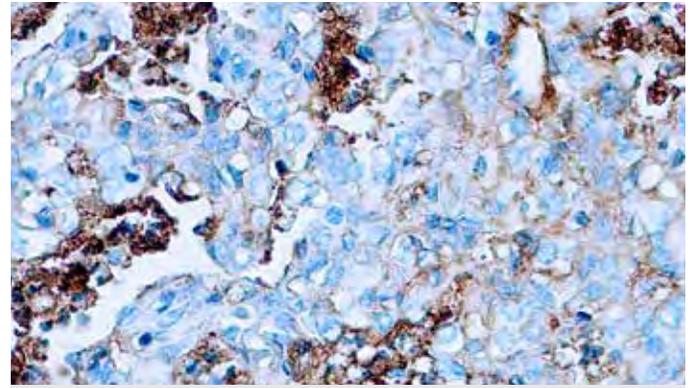
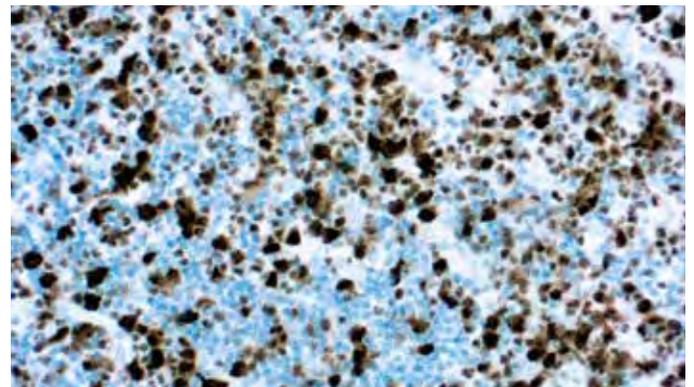
**Cellular Localization:** Nuclear

**Specificity:** This antibody reacts with adenovirus. The adenovirus early gene product E1A is a potent stimulator of cellular proliferation, which when overexpressed can overcome the growth-inhibitory effects of TGF- $\beta$ . The E1A region encodes a series of related proteins (35-46 kDa) with multifunctional capabilities and forms a specific complex with the retinoblastoma tumor suppressor gene product. The E1A and E1B regions together comprise the transforming region of adenovirus. While expression of E1A alone is sufficient to immortalize primary cells, complete transformation requires the additional expression of the E1B region.

IVD only for markets outside the U.S. RUO for U.S. market.

CONCENTRATED ANTIBODIES KEY: Mob = Mouse Monoclonal | RMAb = Rabbit Monoclonal | RP = Rabbit Polyclonal

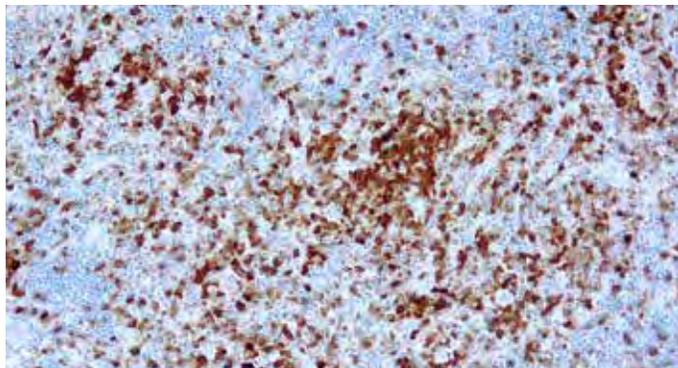
CONCENTRATED VOLUME KEY: MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**Adipophilin****Clone:** DBM15.60**Catalog No.:** Mob534 Concentrated  
PDM534 Prediluted*Formalin fixed paraffin embedded adrenal carcinoma stained with Adipophilin (Mob534).***Immunogen:** Recombinant human Adipophilin protein fragment.**Isotype:** IgG2b, kappa**Positive Control:** Adrenal gland**Cellular Localization:** Cytoplasmic**Specificity:** This protein is associated with the lipid globule surface membrane material, and maybe involved in development and maintenance of adipose tissue. However, it is not restricted to adipocytes as previously thought, but is found in a wide range of cultured cell lines, including fibroblasts, endothelial and epithelial cells, and tissues, such as lactating mammary gland, adrenal cortex, Sertoli Leydig cells, hepatocytes in alcoholic liver cirrhosis, suggesting that it may serve as a marker of lipid accumulation in diverse cell types and diseases.**Adrenocorticotrophic Hormone (ACTH) (AH26)****Clone:** AH26**Catalog No.:** Mob244 Concentrated  
PDM583 Prediluted*Formalin fixed paraffin embedded human pituitary stained with Adrenocorticotrophic Hormone (ACTH) (Mob244).***Immunogen:** BALB/C mice were injected with a synthetic peptide corresponding to amino acids 1-24 from the N-terminal of human ACTH.**Isotype:** IgG1**Positive Control:** Pituitary**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to an epitope on the N-terminus of ACTH. This antibody stains corticotrophs in the adenohypophysis and is useful in the classification of pituitary adenomas.**Albumin****Catalog No.:** RP046 Concentrated*Formalin fixed paraffin embedded human liver stained with Albumin antibody (RP046).***Immunogen:** Purified human albumin.**Positive Control:** Liver**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with human albumin. This antibody is free of other rabbit serum proteins. Specificity is determined by Ouchterlony double diffusion (ODD) and immunoelectrophoresis (IEP) versus human serum and human albumin.**ALK (Clone 4A4)****Clone:** 4A4**Catalog No.:** Mob566 Concentrated  
PDM566 Prediluted*Formalin fixed paraffin embedded rhabdomyosarcoma stained with ALK Clone 4A4 (Mob566).***Immunogen:** Recombinant human ALK protein fragment.**Isotype:** IgG2b**Positive Control:** Anaplastic large cell lymphoma**Cellular Localization:** Cytoplasmic and nuclear staining (dot-like)**Specificity:** Anaplastic lymphoma kinase (ALK) known as ALK tyrosine kinase receptor or CD246, is a tyrosine kinase receptor. ALK is an important biomarker for diagnosis of non-small cell lung cancer (NSCLC).

## ALK/p80 (Anaplastic Lymphoma Kinase)

Clone: 5A4

Catalog No.: Mob416 Concentrated



Formalin fixed paraffin embedded anaplastic lymphoma kinase stained with ALK/p80 antibody (Mob416).

**Immunogen:** Prokaryotic recombinant protein corresponding to a region which spans the tyrosine kinase catalytic domain and part of the C-terminus of NPM-ALK transcript (419-520 aa).

**Isotype:** IgG1

**Positive Control:** Anaplastic lymphoma

**Cellular Localization:** Cytoplasmic and/or nuclear

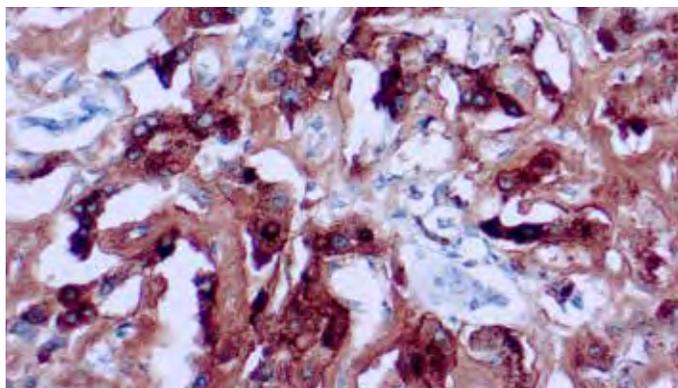
**Specificity:** Anaplastic large cell lymphoma (ALCL) is usually composed of large pleomorphic cells, which express CD30 antigen and the epithelial membrane antigen (EMA). These tumor cells tend to occur in younger patients and may be associated with cutaneous and extranodal involvement. Large cell lymphoma account for approximately 25% of all non-Hodgkin lymphomas in children and young adults.

IVD only for markets outside the U.S. RUO for U.S. market.

## Amyloid A Component

Clone: mcl

Catalog No.: Mob003 Concentrated  
PDM118 Prediluted



Formalin fixed paraffin embedded human amyloidosis stained with Amyloid A Component antibody (Mob003).

**Immunogen:** Human amyloid A protein coupled to horseradish peroxidase and kininogen.

**Isotype:** IgG2a, kappa

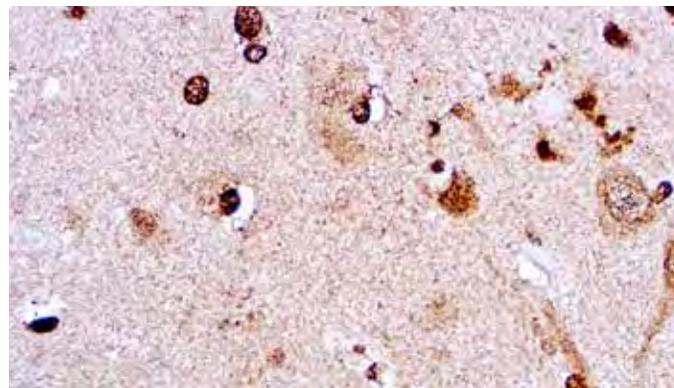
**Positive Control:** Kidney

**Cellular Localization:** Extracellular

**Specificity:** This antibody reacts with amyloid deposits in all organs and tissues. It reacts specifically with amyloid A protein in the native fibrils as well as fixed fibrils but does not show any reactivity with non-amyloid A fibril protein.

## Amyloid Precursor Protein (APP)

Catalog No.: RP123 Concentrated



Formalin fixed paraffin embedded human brain stained with APP (RP123).

**Immunogen:** A synthetic peptide corresponding to C-terminal of human APP.

**Positive Control:** Brain

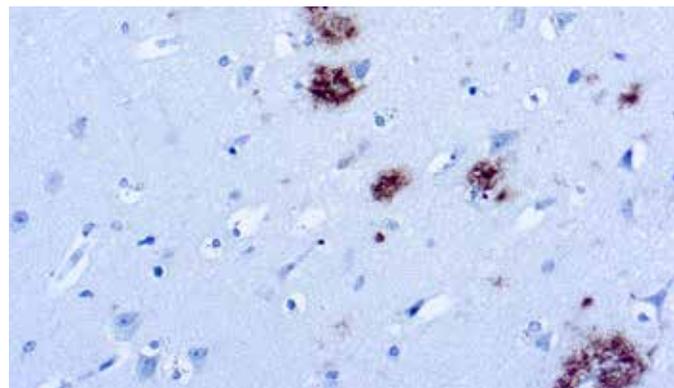
**Cellular Localization:** Cytoplasmic, extracellular

**Specificity:** This antibody reacts with a 95-100 kDa protein. This antibody recognizes amyloid precursor proteins APP695, APP751 and APP770. Amyloid precursor protein and APP—like proteins are transmembrane glycoproteins with a similar modular domain structure.

## $\beta$ -Amyloid Protein

Clone: BAM-10

Catalog No.: Mob410 Concentrated



Formalin fixed paraffin embedded amyloidosis stained with  $\beta$ -Amyloid Protein (Mob410).

**Immunogen:** A synthetic  $\beta$ -amyloid peptide (1-40) conjugated to KLH.

**Isotype:** IgG1

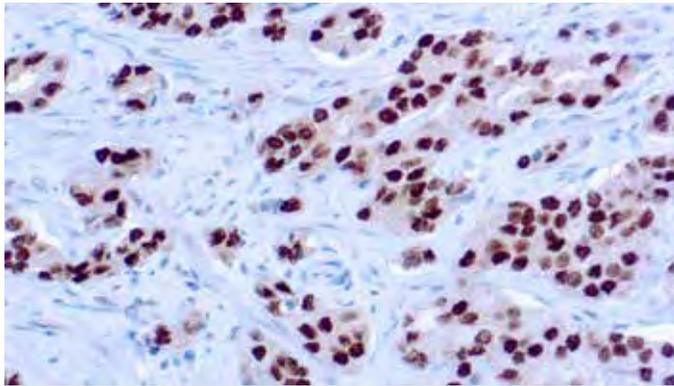
**Positive Control:** Brain, Amyloidosis

**Cellular Localization:** Cytoplasmic

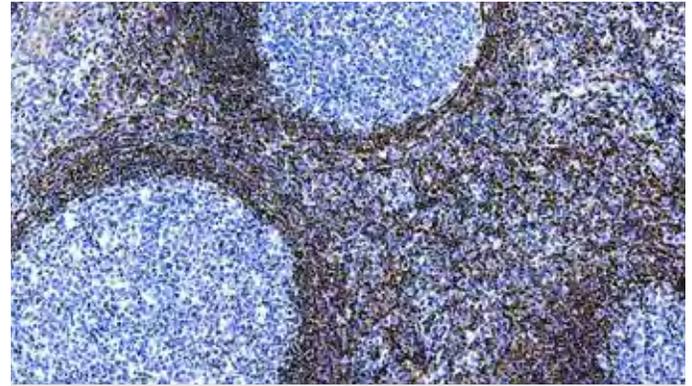
**Specificity:** This antibody reacts with  $\beta$ -amyloid protein. This antibody stains amyloid plaques within the cortex and amyloid deposits in blood vessels.  $\beta$ -amyloid deposits are also detected in Lewy body dementia, Down syndrome, amyloidosis and, in Gram-Parkinson dementia complex. The presence of a large number of neuritic plaques (senile) and neurofibrillary tangles in the cerebral cortex is used as a pathological marker for a disease state and presents the major criterion for the diagnosis of Alzheimer's disease at autopsy.

CONCENTRATED ANTIBODIES KEY: Mob = Mouse Monoclonal | RMAb = Rabbit Monoclonal | RP = Rabbit Polyclonal

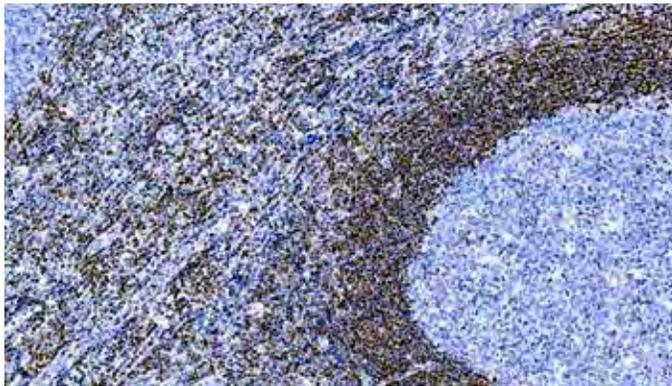
CONCENTRATED VOLUME KEY: MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**Androgen Receptor****Clone:** AR 441**Catalog No.:** Mob245 Concentrated  
PDM167 Prediluted

Formalin fixed paraffin embedded human prostate stained with Androgen Receptor antibody (Mob245).

**Immunogen:** BALB/C mice were injected with a synthetic peptide corresponding to the human androgen receptor.**Isotype:** IgG1**Positive Control:** Prostate carcinoma**Cellular Localization:** Nuclear**Specificity:** This antibody is specific to a protein of 110 kDa, identified as androgen receptor. This antibody reacts with full length AR and also with the newly described A form of the receptor. This antibody does not cross-react with estrogen, progesterone or glucocorticoid receptors.**Bcl-2 Oncoprotein****Clone:** 100/D5**Catalog No.:** Mob130 Concentrated  
PDM209 Prediluted

Formalin fixed paraffin embedded human tonsil stained with Bcl-2 Oncoprotein (Mob130).

**Immunogen:** BALB/C mice were injected with synthetic bcl-2 peptide.**Isotype:** IgG1**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** The bcl-2 product is considered to act as an inhibitor of apoptosis. Bcl-2 expression is inhibited in germinal centers where apoptosis forms part of the B cell production pathway. Reactive follicles show no staining for bcl-2, whereas the cells in neoplastic follicles exhibit membrane staining. Bcl-2  $\alpha$  oncoprotein has been shown to inhibit apoptosis.**Bcl-2 Oncoprotein****Clone:** 124**Catalog No.:** Mob005 Concentrated  
PDM016 Prediluted

Formalin fixed paraffin embedded human tonsil stained with Bcl-2 Oncoprotein (PDM016).

**Immunogen:** Recombinant bcl-2 peptide sequence comprising of 51-54 amino acids of bcl-2 oncoprotein.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to bcl-2 oncoprotein, encoded by a gene involved in the 14;18 chromosomal translocation. In lymphoid tissues, this antibody stains B lymphocytes as well as T cells.**Bcl-6 Oncoprotein****Clone:** LN22**Catalog No.:** Mob468 Concentrated  
PDM176 Prediluted

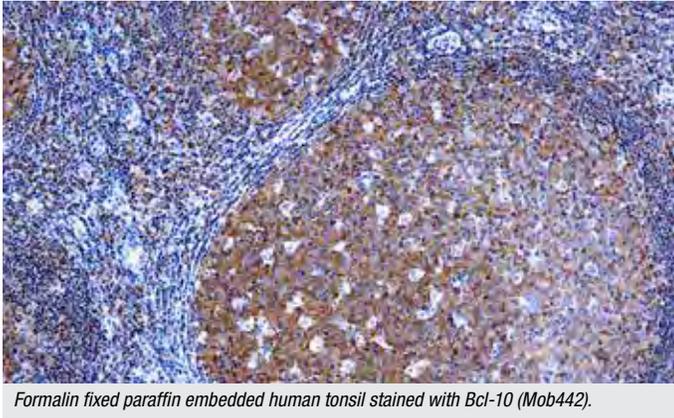
Formalin fixed paraffin embedded human tonsil stained with Bcl-6 antibody (Mob468).

**Immunogen:** Recombinant protein from the N-terminus of human Bcl-6.**Isotype:** IgG2b**Positive Control:** Tonsil**Cellular Localization:** Nuclear**Specificity:** This antibody reacts with the Bcl-6 gene product in follicular lymphomas, diffuse large B cell lymphomas, Burkitt's lymphomas, and in nodular, lymphocyte predominant Hodgkin's disease. Bcl-6 is a proto-oncogene that encodes Kruppel-type Zinc-finger protein of 95 kDa and shares homology with transcription factor. Bcl-6 is mainly expressed in normal germinal center B cells and related lymphomas.

## Bcl-10

Clone: 151

Catalog No.: Mob442 Concentrated  
PDM442 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Bcl-10 (Mob442).

**Immunogen:** Human recombinant Bcl-10

**Isotype:** IgG1

**Positive Control:** Tonsil

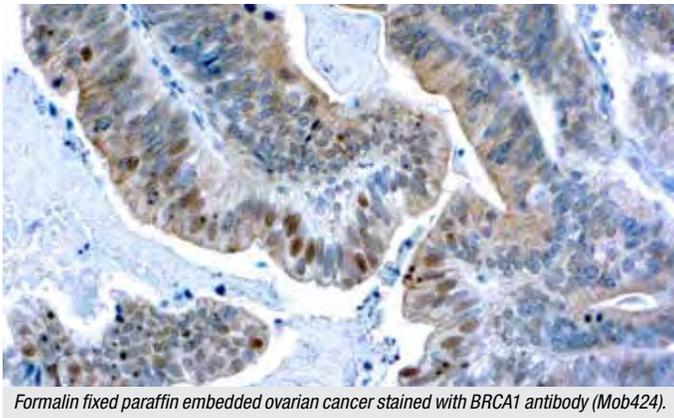
**Cellular Localization:** Nuclear

**Specificity:** Monoclonal anti-bcl-10 reacts specifically with human bcl-10. The epitope recognized by the antibody resides within amino acids 122-168 of human bcl-10 molecule. Bcl-10, also designated as CIPER, mE10, cE10, CARMEN, and CLAP, is an N-terminal CARD (caspase recruitment domain) containing protein. It is a cellular homologue of the equine herpesvirus-2 protein E-10 (vCLAP). Bcl-10 was implicated in the regulation of apoptosis by interacting with caspase 9, enhancing procaspase 9 processing, and triggering its activation when overexpressed in the cell. Bcl-10 cellular overexpression induces JNK, p38, and NF- $\kappa$ B activation. Deregulation of bcl-10 expression was also demonstrated to be involved in cellular oncogenesis.

## BRCA1

Clone: GLK-2

Catalog No.: Mob424 Concentrated



Formalin fixed paraffin embedded ovarian cancer stained with BRCA1 antibody (Mob424).

**Immunogen:** Peptide corresponding to amino acids 1839-1863 of the C-terminus of BRCA1.

**Isotype:** IgM, kappa

**Positive Control:** Ovarian carcinoma

**Cellular Localization:** Cytoplasmic

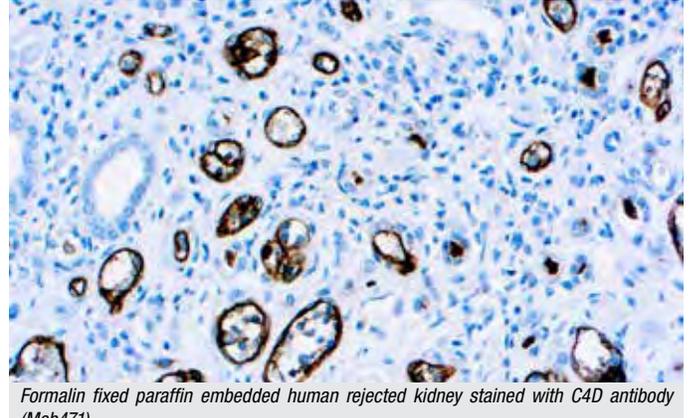
**Specificity:** BRCA1 recognizes a 22kDa protein. This antibody stains 94% of ovarian carcinomas with a mutation in exon 11. However, staining was absent in 100% of tumors with mutations other than exon 11.

IVD only for markets outside the U.S. RUO for U.S. market.

## C4D

Clone: C4D204

Catalog No.: Mob471 Concentrated  
PDM184 Prediluted



Formalin fixed paraffin embedded human rejected kidney stained with C4D antibody (Mob471).

**Immunogen:** A recombinant fragment specific to Complement 4d.

**Isotype:** Mouse IgG1

**Positive Control:** Rejected Kidney

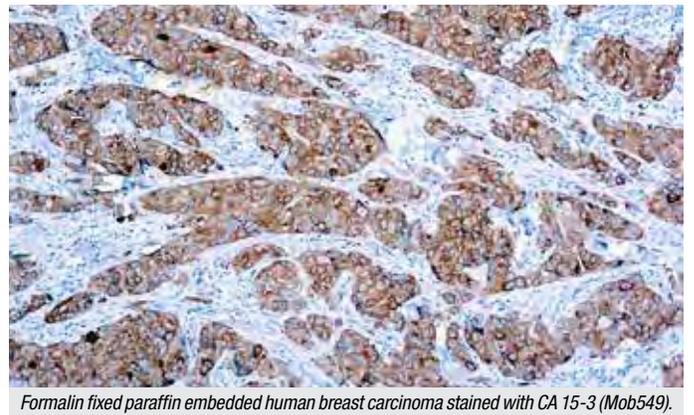
**Cellular Localization:** Membrane Cytoplasm

**Specificity:** Complement 4d (C4d) is the most clinically used marker for humoral rejection. It is a degradation product of the activated complement factor C4b. Complement 4d is typically initiated by binding of antibodies to specific target molecules. Following activation and degradation of the C4 molecule, thio-ester groups are exposed, which allow transient, covalent binding of the degradation product complement 4d to endothelial cell surfaces and extracellular matrix components of vascular basement membranes near the sites of C4 activation. Complement 4d is also found in intracytoplasmic vacuoles of endothelial cells. Covalent binding renders C4d a stable molecule that can easily be detected by immunohistochemistry.

## CA 15-3

Clone: DBMM1

Catalog No.: Mob549 Concentrated  
PDM549 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with CA 15-3 (Mob549).

**Immunogen:** Human breast cancer cell line ZR-75-1.

**Isotype:** IgG1, kappa

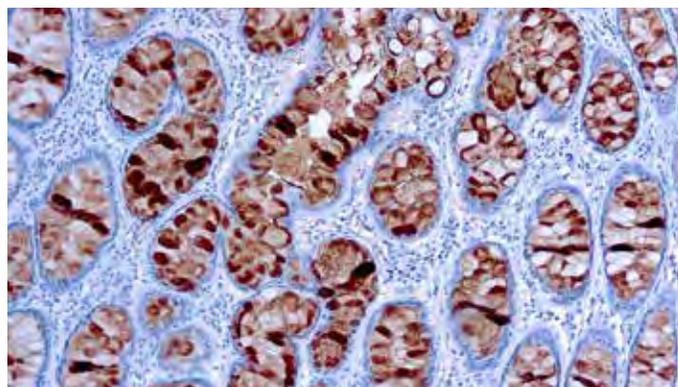
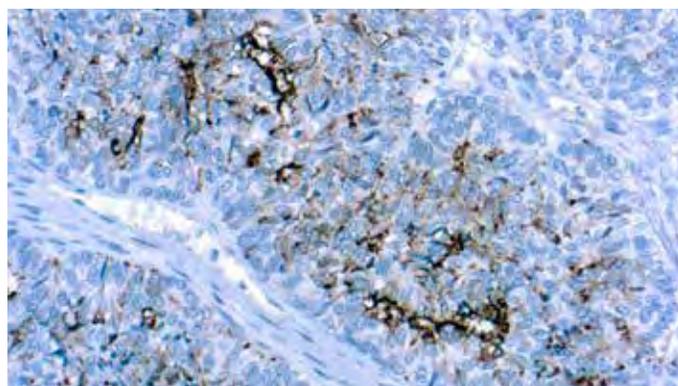
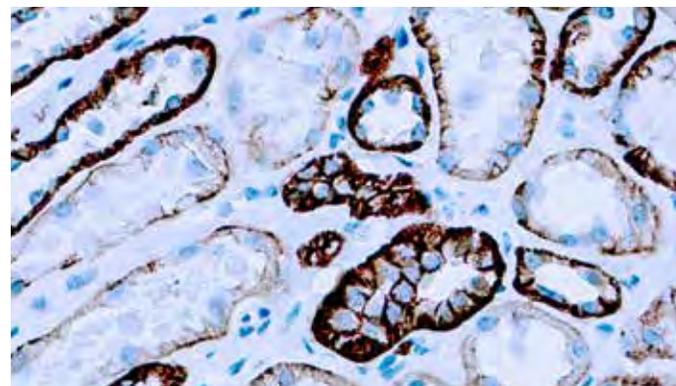
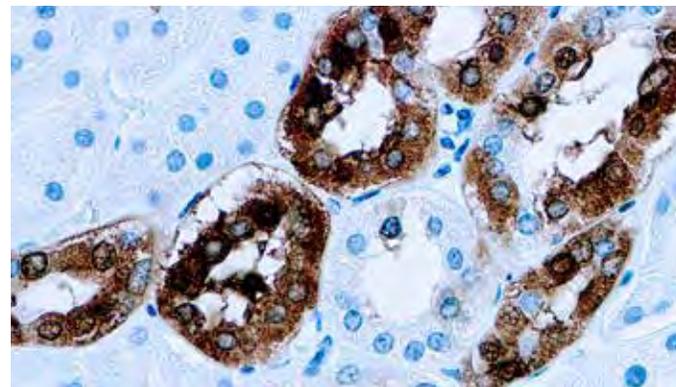
**Positive Control:** Breast carcinoma

**Cellular Localization:** Cytoplasmic, cell membrane

**Specificity:** This antibody is specific to epithelial membrane antigen (EMA), CA 15-3, or polymorphic epithelial mucin. This antibody stains an underglycosylated MUC1 often present on carcinoma cells.

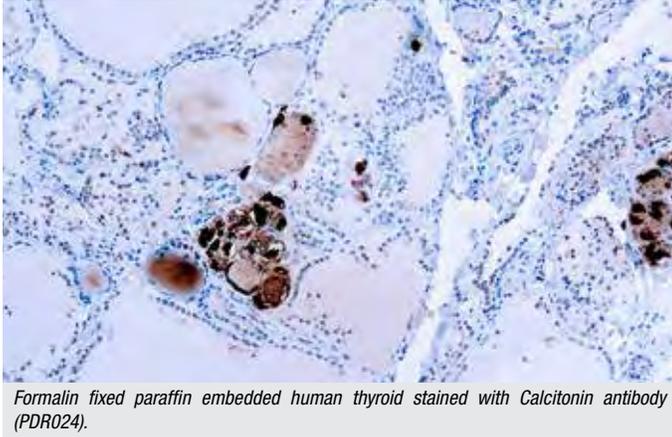
CONCENTRATED ANTIBODIES KEY: Mob = Mouse Monoclonal | RMAB = Rabbit Monoclonal | RP = Rabbit Polyclonal

CONCENTRATED VOLUME KEY: MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**CA 19-9****Clone:** C241:5:1:4**Catalog No.:** Mob109 Concentrated  
PDM567 Prediluted*Formalin fixed paraffin embedded colon cancer stained with CA 19-9 antibody. (Mob109).***Immunogen:** Human colorectal adenocarcinoma cell line COLO 205.**Isotype:** IgG1**Positive Control:** Colon carcinoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts specifically with sialyl Lewis a and recognizes an epitope being designated CA 19-9. It does not cross-react with Lewis A and Lewis B. CA 19-9 has been shown to be useful marker in the diagnosis and management of gastrointestinal cancers.**CA 125****Clone:** OV185:1**Catalog No.:** Mob110 Concentrated  
PDM323 Prediluted*Formalin fixed paraffin embedded ovarian cancer stained with CA 125 antibody. (Mob110).***Immunogen:** Partially purified human mucin fraction from a pool of cancer tissues of patients with epithelial ovarian cancer.**Isotype:** IgG1**Positive Control:** Ovarian carcinoma**Cellular Localization:** Extracellular membrane**Specificity:** This antibody reacts specifically with CA 125 ovarian cancer antigen. Several studies have shown that CA 125 is a useful tumor marker for ovarian epithelial malignancies. However, CA 125 has been described in other neoplasms such as seminal vesicle and anaplastic lymphomas.**Cadherin, Pan****Clone:** CH-19**Catalog No.:** Mob228 Concentrated*Formalin fixed paraffin embedded human renal cell carcinoma stained with CA 19-9 antibody. (Mob228).***Immunogen:** Synthetic peptide corresponding to the C-terminal amino acids of chicken N-cadherin with extra N-terminal lysine residue.**Isotype:** IgG1**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody reacts with pan cadherin with a distinct 135 kDa band from a wide variety of tissues. Cadherins are members of a multigene family of single chain glycoprotein receptors mediating Ca<sup>2+</sup> dependent cell-cell adhesion.**Calbindin-D-28K****Clone:** CB-955**Catalog No.:** Mob554 Concentrated*Formalin fixed paraffin embedded human kidney stained with Calbindin-D-28K antibody. (Mob554).***Immunogen:** Purified bovine kidney calbindin-D-28K.**Isotype:** IgG1**Positive Control:** Kidney**Cellular Localization:** Cytoplasmic, cell membrane**Specificity:** This antibody is specific to a protein of 28 kDa. Calbindin-D-28K is also known as vitamin D-dependent calcium-binding protein or cholecalciferin. Calbindin D-28K has a broad tissue distribution; however it exhibits a cell type-specific expression pattern. This antibody reacts specifically with calbindin-D-28K in brain and kidney tissues.

## Calcitonin

Catalog No.: **RP050 Concentrated**  
**PDR024 Prediluted**



Formalin fixed paraffin embedded human thyroid stained with Calcitonin antibody (PDR024).

**Immunogen:** Synthetic peptide of human calcitonin corresponding to amino acids 1-32.

**Positive Control:** Thyroid

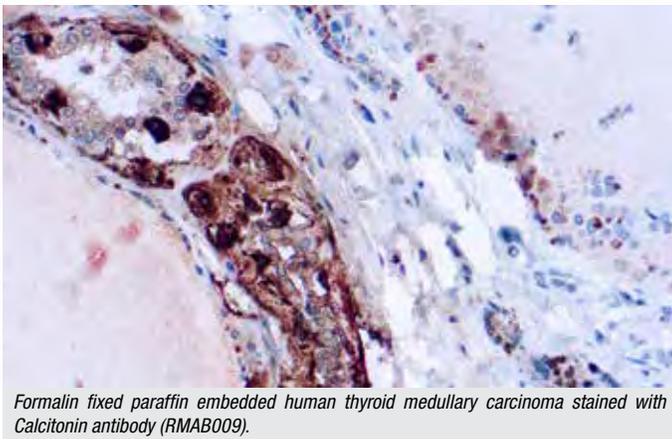
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody stains C cells of the thyroid. Staining for calcitonin may be used for the identification of a spectrum of C cell proliferative abnormalities ranging from C cell hyperplasia to invasive tumors.

## Calcitonin

Clone: **SP17**

Catalog No.: **RMAB009 Concentrated**  
**RMPD009 Prediluted**



Formalin fixed paraffin embedded human thyroid medullary carcinoma stained with Calcitonin antibody (RMAB009).

**Immunogen:** Synthetic human calcitonin 1-32 amino acid peptide.

**Isotype:** IgG

**Positive Control:** Thyroid or medullary carcinoma

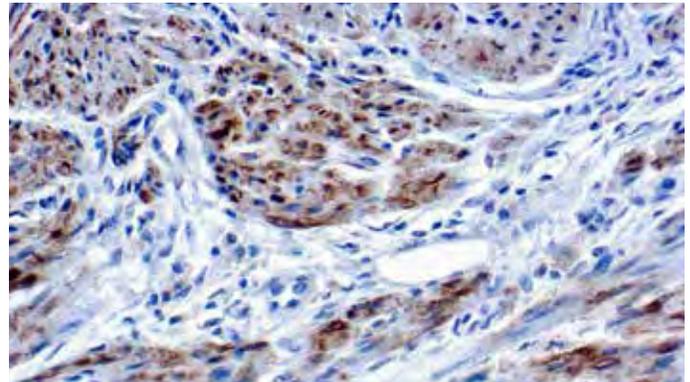
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes calcitonin, a 32 amino acid peptide, which can be demonstrated in C cells of the normal and hyperplastic thyroid. Staining for calcitonin may be used for the identification of a spectrum of C cell proliferative abnormalities ranging from C cell hyperplasia to invasive tumors. Staining for calcitonin in medullary carcinoma of the thyroid produces a fine granular pattern in the cytoplasm. Amyloid deposits within the tumor may also exhibit varying degrees of calcitonin activity.

## Caldesmon

Clone: **hHCD**

Catalog No.: **Mob556 Concentrated**  
**PDM223 Prediluted**



Formalin fixed paraffin embedded endometrial cancer stained with Caldesmon antibody (Mob556).

**Immunogen:** BALB/C mice were injected with human uterus smooth muscle extract.

**Isotype:** IgG1

**Positive Control:** Endometrial cancer

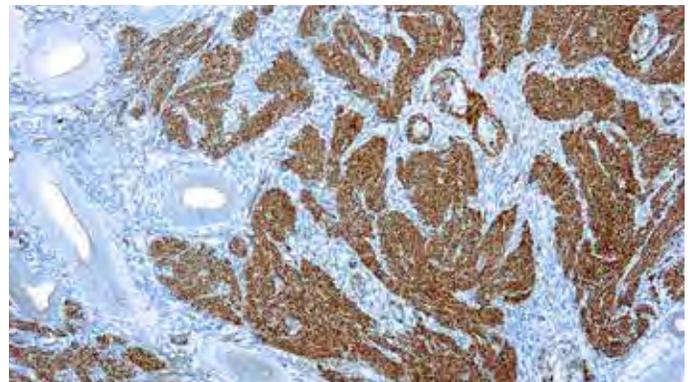
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to high molecular weight (120-150 kDa) h-caldesmon. Caldesmon is involved in smooth muscle and non-muscle contraction. Two closely related variants of human caldesmon have been identified. The h-caldesmon variant is predominantly expressed in smooth muscle, whereas l-caldesmon (71-80 kD) is found in non-muscle tissue and cells.

## Calponin-1

Clone: **CALP (same as hCP)**

Catalog No.: **Mob345 Concentrated**  
**PDM219 Prediluted**



Formalin fixed paraffin embedded human uterus stained with Calponin antibody (Mob345).

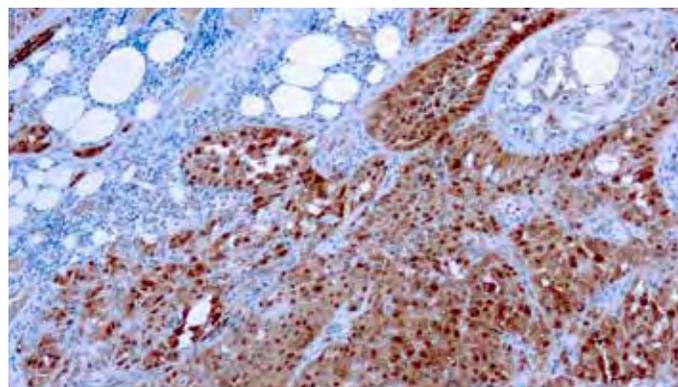
**Immunogen:** BALB/C mice were injected with crude human uterus extract.

**Isotype:** IgG1

**Positive Control:** Breast

**Cellular Localization:** Cytoplasmic

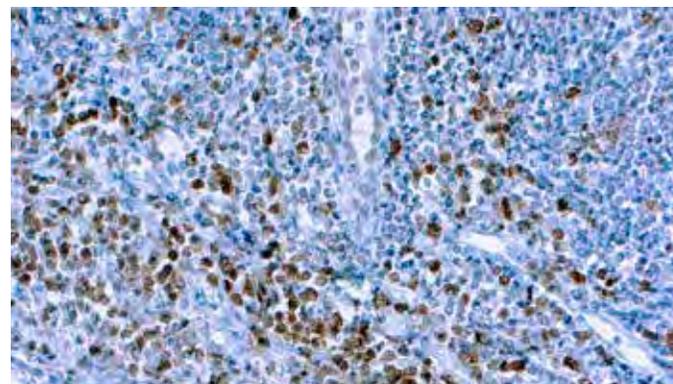
**Specificity:** This antibody reacts with a 34 kDa protein known as calponin. Calponin, a calmodulin, binds tropomyosin and F-actin and is thought to be involved in the regulation of smooth muscle contraction. Expression of calponin is restricted to smooth muscle cells. Two isoforms of calponin exist whose molecular weights are 34 kDa and 29 kDa. 29 kDa isoform is primarily restricted to the muscle of the urogenital tract.

**Calretinin****Clone:** SP13**Catalog No.:** **RMAB010 Concentrated**  
**RMPD010 Prediluted**

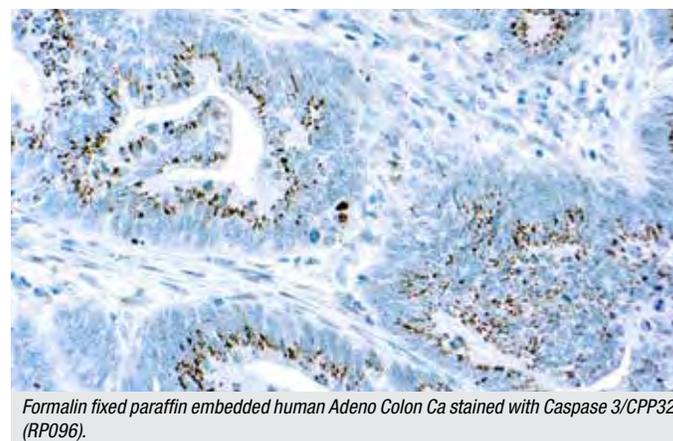
Formalin fixed paraffin embedded human mesothelioma stained with Calretinin antibody (RMAB010).

**Immunogen:** Recombinant full-length mouse calretinin protein.**Isotype:** IgG**Positive Control:** Mesothelioma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes a 31.5 kDa protein named calretinin. Calretinin is an intracellular calcium-binding protein belonging to the troponin C superfamily and is characterized by a structural motif described as the EF-hand domain. The immunohistochemical detection of calretinin in developing cerebellum is restricted to the later stages indicated by weak staining from week 21 of gestation in Purkinje and basket cells and in neurons of the dentate nucleus. The intensity of staining increases as the cerebellum matures. In tumors, calretinin has been detected in mesotheliomas and some pulmonary adenocarcinomas.**Caspase 1****Catalog No.:** **RP175 Concentrated**  
**PDR175 Prediluted**

Formalin fixed paraffin embedded human Placenta stained with Caspase 1 (RP175).

**Immunogen:** Caspase1 (1-250aa) protein.**Positive Control:** Placenta**Cellular Localization:** Nuclear, cell membrane**Specificity:** Caspase 1 and is expressed as a proenzyme in many tissues. Active Caspase 1 is a tetramer of two subunits p10 and p20 in 2:2 ratio. Overexpression of caspase 1 can induce apoptosis in fibroblast, which can be inhibited by overexpression of Crm A, a protein from pox virus.**Caspase 3/ CPP32****Clone:** 3CSP03**Catalog No.:** **Mob309 Concentrated**

Formalin fixed paraffin embedded human tonsil stained with Caspase 3/ CPP32 antibody (Mob309).

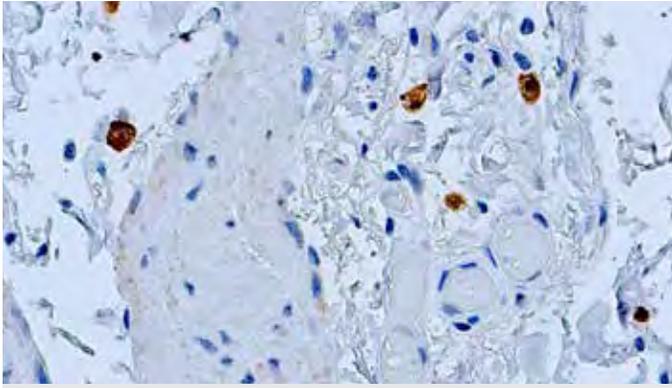
**Immunogen:** BALB/C mice were injected with recombinant full length human caspase 3 protein.**Isotype:** IgG2a**Positive Control:** Tonsil**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to a 32 kDa protein. Caspase 3 is associated with induction of apoptosis. Caspase 3 is ubiquitously expressed and is synthesized as an inactive proenzyme.*IVD only for markets outside the U.S. RUO for U.S. market.***Caspase 3/ CPP32****Catalog No.:** **RP096 Concentrated**  
**PDR172 Prediluted**

Formalin fixed paraffin embedded human Adeno Colon Ca stained with Caspase 3/ CPP32 (RP096).

**Immunogen:** A synthetic peptide corresponding to the cleavage site of human caspase 3 (amino acids 167-175), conjugated to KLH.**Positive Control:** Tonsil**Cellular Localization:** Cytoplasmic, some nuclear**Specificity:** This antibody reacts with the active form of caspase 3 (17 kD protein). Caspase 3 is a member of the interleukin-1 beta-converting enzyme family and is thought to be associated with the induction of apoptosis. Caspase 3 is synthesized as an inactive 32 kD proenzyme and is processed during apoptosis generating two subunits of 17 kD and 12 kD. Caspase 3 stains the epithelial cells of skin, renal proximal tubules, and collecting ducts.*IVD only for markets outside the U.S. RUO for U.S. market.*

## Caspase 8/FLICE

Catalog No.: RP097 Concentrated



Formalin fixed paraffin embedded human stomach stained with Caspase 8 antibody (RP097).

**Immunogen:** Recombinant full-length human caspase 8 protein.

**Positive Control:** Stomach

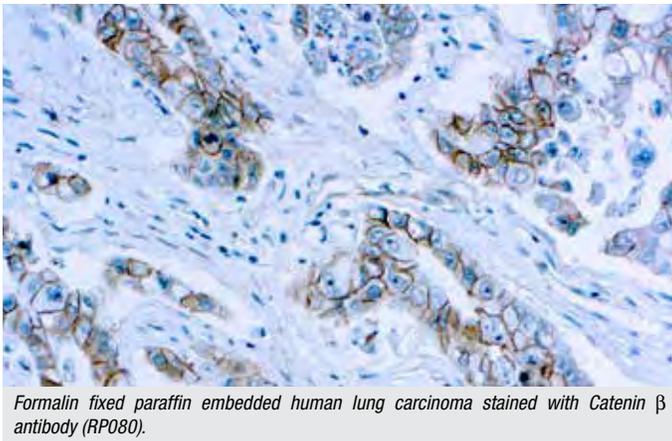
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 55 kDa protein. Caspase 8 has an N-terminal domain with sequence homology to the death effector domain (DED) of FADD. Caspase 8 binds to DED of FADD. Caspase 8 is activated by association with Fas/FADD death-inducing signaling complex to release two active subunits, p18 and p10, into the cytosol, where they activate other caspases, amplifying the apoptotic signal.

IVD only for markets outside the U.S. RUO for U.S. market.

## Catenin, $\beta$

Catalog No.: RP080 Concentrated  
PDR060 Prediluted



Formalin fixed paraffin embedded human lung carcinoma stained with Catenin  $\beta$  antibody (RP080).

**Immunogen:** A synthetic peptide derived from the C-terminus of human  $\beta$ -catenin protein.

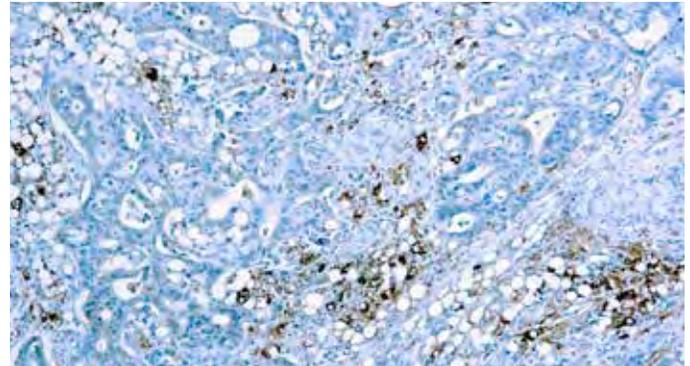
**Positive Control:** Breast carcinoma, Large intestine

**Cellular Localization:** Cytoplasmic, cell membrane

**Specificity:** This antibody reacts with a 92 kDa protein known as  $\beta$ -catenin. The catenins ( $\alpha$ ,  $\beta$  and  $\gamma$ ) are ubiquitously expressed cytoplasmic proteins, which are associated with E-cadherin.  $\beta$ -catenin can also bind to APC. Cadherin/catenin complexes are linked to the cytoskeleton via a direct association between  $\alpha$ -actinin and  $\alpha$ -catenin.

## Cathepsin D

Catalog No.: RP004 Concentrated  
PDR004 Prediluted



Formalin fixed paraffin embedded human prostate stained with Cathepsin D antibody (RP004).

**Immunogen:** Cathepsin D isolated from human liver.

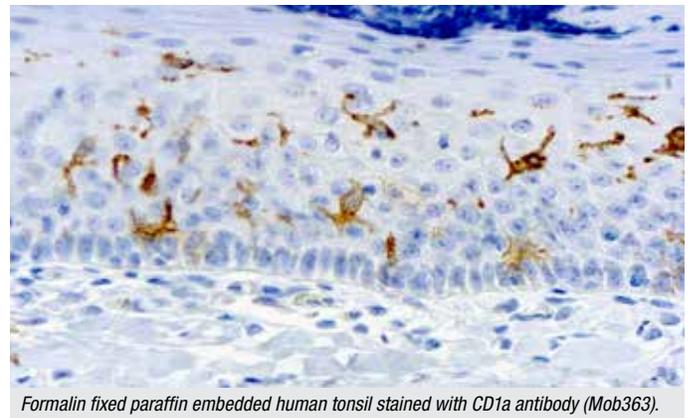
**Positive Control:** Breast carcinoma, Prostate

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the zymogen as well as the activated form of cathepsin D. It stains fibroblasts and macrophages strongly but stains weakly with the myoepithelial cells of breast. It stains the sweat ducts and glands in the skin, islets cells, and granules of pancreatic acini.

## CD1a

Clone: O10  
Catalog No.: Mob363 Concentrated  
PDM173 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD1a antibody (Mob363).

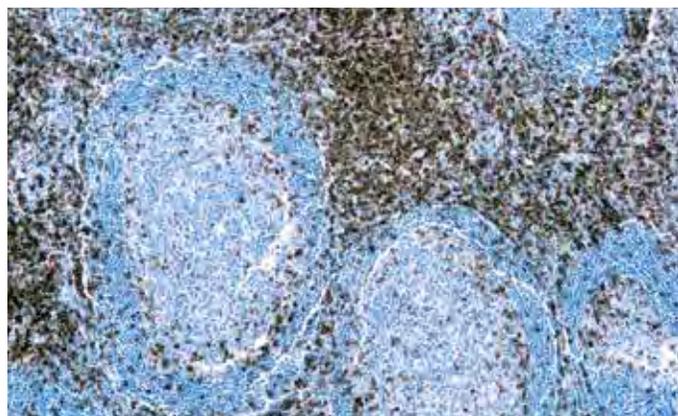
**Immunogen:** BALB/C mice were injected with thymus cells.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane, cytoplasm

**Specificity:** This antibody reacts with a 49 kDa protein. At least five CD1 genes are identified (CD1a, b, c, d, and e). This antibody reacts with cortical thymocytes, Langerhans cells in epidermis, dendritic cells of dermis, and Langerhans cells of mucosa of tonsil. This antibody may be useful in the characterization of leukemias and lymphomas.

**CD3****Clone:** SP7**Catalog No.:** RMAB005 Concentrated  
RMPD005 Prediluted

Formalin fixed paraffin embedded human tonsil stained with CD3 antibody (RMPD005).

**Immunogen:** A synthetic 13-mer peptide corresponding to aa 156-168 of the  $\epsilon$  chain of human CD3 protein.

**Isotype:** IgG

**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane

**Specificity:** The CD3 antigen is present on early thymocytes and mature T cells and is generally regarded as a pan-T cell marker. This antibody will help detect CD3 expression in normal and neoplastic tissues. This antibody reacts with the intracytoplasmic portion of the CD3 antigen expressed by T cells. It stains human T cells in both the cortex and medulla of the thymus and in peripheral lymphoid tissues. This antibody is suitable for staining normal and neoplastic T cells in formalin-fixed, paraffin-embedded tissues.



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**CD3****Clone** LN10**Catalog No.:** Mob474 Concentrated  
PDM186 Prediluted

Formalin fixed paraffin embedded human tonsil stained with CD3 (Mob474).

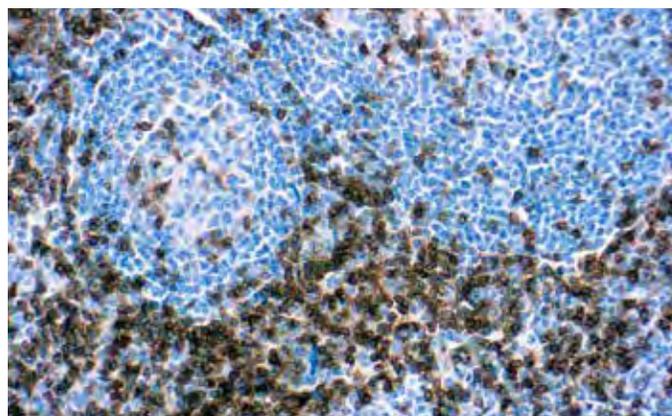
**Immunogen:** Prokaryotic recombinant protein corresponding to C-terminal region of CD3

**Isotype:** IgG1

**Positive Control:** Tonsil

**Cellular localization:** Cell membrane

**Specificity:** The Clone LN10 is specific for the non-glycosylated epsilon chain of the human CD3 molecule. Clone LN10 recognizes T cells in thymus, bone marrow, peripheral lymphoid tissue and blood and is a pan T cell marker. The CD3 molecule consists of five different polypeptide chains with molecular weights ranging from 16 to 28 kD. The CD3 antigen is first detected in early thymocytes and its appearance probably represents one of the earliest signs of commitment to the T cell lineage.

**CD3****Clone:** F7.2.38**Catalog No.:** Mob422 Concentrated

Formalin fixed paraffin embedded human tonsil stained with CD3 antibody (Mob422).

**Immunogen:** Purified CD3 $\epsilon\gamma\delta$ /CD3 $\omega$

**Isotype:** IgG1

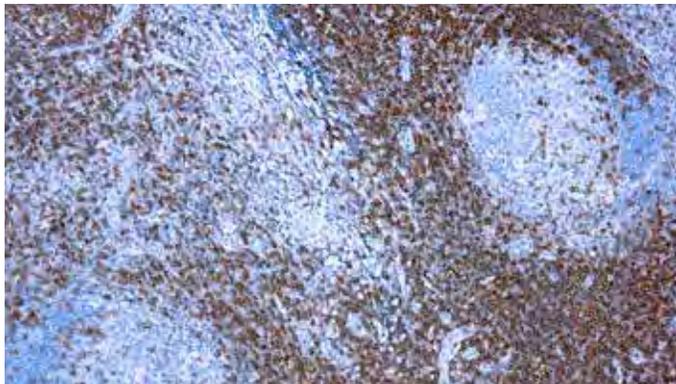
**Positive Control:** Tonsil

**Cellular Localization:** Membrane and cytoplasmic

**Specificity:** CD3 is first detectable in early thymocytes and its appearance probably represents one of the earliest signs of commitment to T cell lineage. In cortical thymocytes, the antigen is predominantly present as an intracytoplasmic constituent. This antibody labels CD3 $\epsilon$  and is a useful tool for the identification of T cells and related neoplasms.

## CD3, T Cell

Catalog No.: **RP005 Concentrated**  
**PDR002 Prediluted**



Formalin fixed paraffin embedded human Tonsil stained with CD3 antibody (PDR002).

**Immunogen:** Synthetic human CD3 polypeptide conjugated to bovine serum albumin.

**Positive Control:** Tonsil

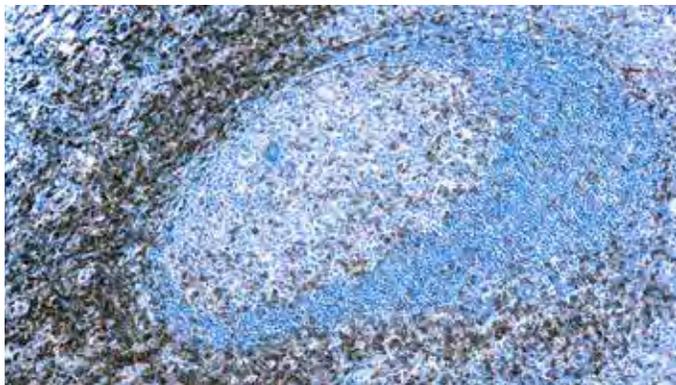
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with intracytoplasmic portion of the CD3 antigen on the T cells. It stains T cells in cortex as well as medulla of the thymus and lymphoid tissues. This antibody also labels T cell neoplasm, malignant histiocytes and Reed-Sternberg cells in Hodgkin lymphoma.

## CD4

Clone: **EP204**

Catalog No.: **RMAB083 Concentrated**  
**RMPD083 Prediluted**



Formalin fixed paraffin embedded human tonsil stained with CD4 (RMAB083).

**Immunogen:** Synthetic peptide corresponding to residues of human CD4 protein.

**Isotype:** IgG

**Positive Control:** Tonsil

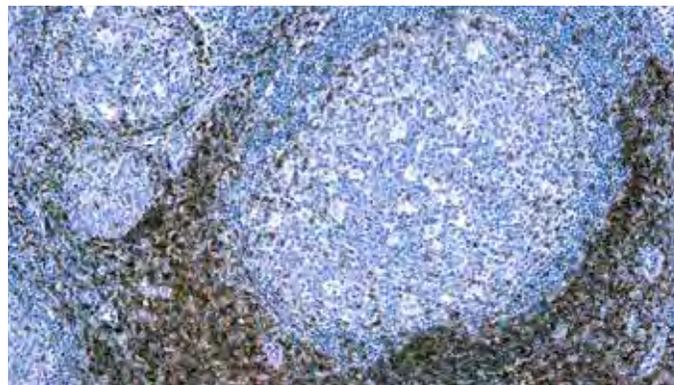
**Cellular Localization:** Cell membrane

**Specificity:** CD4 is glycoprotein found on the surface of immune cells such as T helper cells, monocytes, macrophages, and dendritic cells. It is co-receptor that assists the T-cell receptor (TCR) with antigen-presenting cell and also interacts directly with MHC class II molecules of the surface of antigen-presenting cells. Most mature T-cell lymphomas are CD4 positive with the exception of aggressive NK-cell leukemia and extranodal NK/T-cell lymphoma. CD4 plays important role in the classification of lymphocytes in inflammatory and malignant lymphomas.

## CD5

Clone: **4C7**

Catalog No.: **Mob138 Concentrated**  
**PDM095 Prediluted**



Formalin fixed paraffin embedded human tonsil stained with CD5 antibody (Mob138).

**Immunogen:** Recombinant prokaryotic fusion protein corresponding to the external domain of the CD5 molecule.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

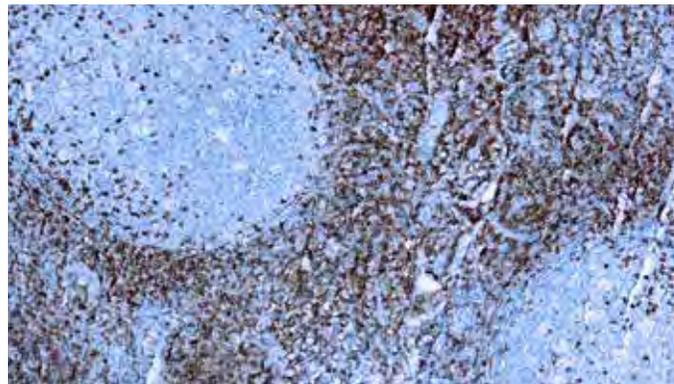
**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to CD5 antigen. It stains a cell surface glycoprotein of 67 kDa present on 95% of thymocytes and 72% of peripheral blood lymphocytes. CD5 is expressed by many T cell leukemias, lymphomas, and activated T cells. This antibody can be used for the detection of T cell acute lymphocytic leukemias.

## CD5

Clone: **SP19**

Catalog No.: **RMAB011 Concentrated**  
**RMPD011 Prediluted**



Formalin fixed paraffin embedded human tonsil stained with CD5 antibody (RMAB011).

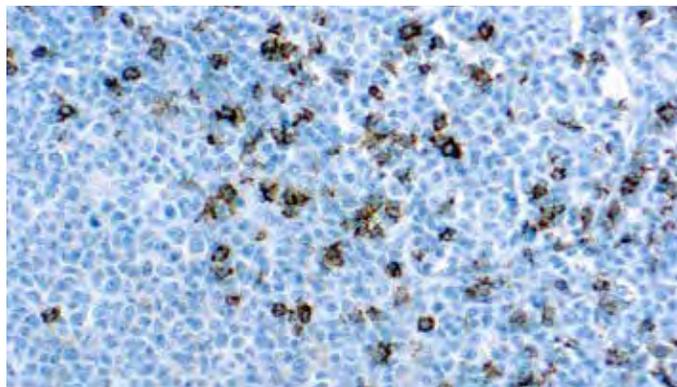
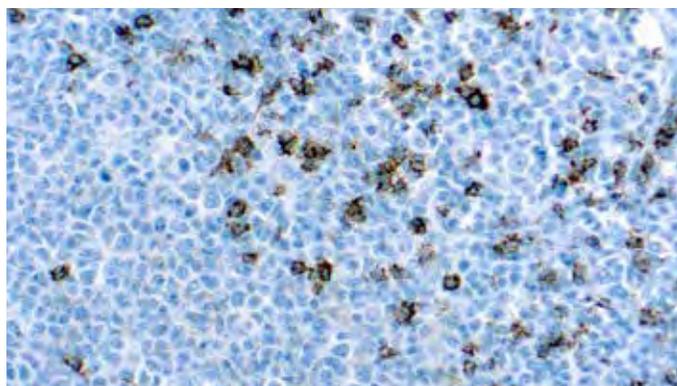
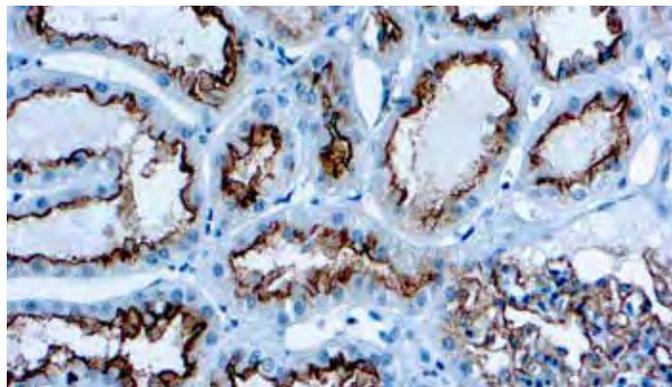
**Immunogen:** Synthetic peptide from the intracellular region of CD5.

**Isotype:** IgG

**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane

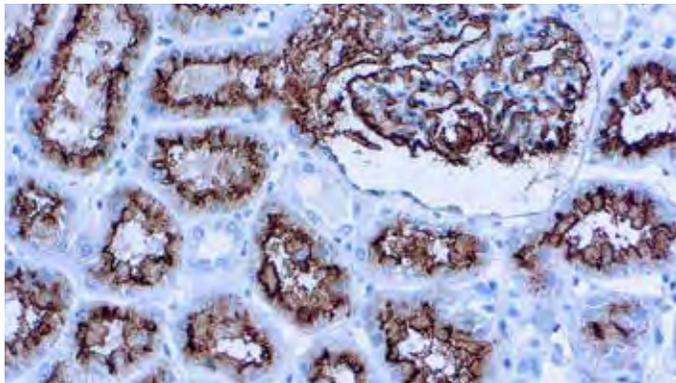
**Specificity:** CD5 is expressed by many T cell leukemias, lymphomas, and activated T cells. Occasionally, CD5 antigen is also expressed on a subset of B cells. Mantle cell lymphomas (same as diffuse centrocytic lymphomas) are CD5(+) while the follicle center cell lymphoma are CD5(-).

**CD8****Clone:** SP16**Catalog No.:** RMAB012 Concentrated  
RMPD012 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD8 antibody (RMPD012).***Immunogen:** Synthetic peptide sequence comprising the 13 C-terminal amino acids of the cytoplasmic domain of the CD8  $\alpha$  chain.**Isotype:** IgG**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody recognizes the CD8. The CD8 molecule consists of two chains,  $\alpha$  and  $\beta$ , which are expressed as a disulphide-linked  $\alpha/\beta$  heterodimer or as an  $\alpha/\alpha$  homodimer on T cell subset, thymocytes, and NK cells. The majority of CD8+ T cells express CD8 as  $\alpha/\beta$  heterodimer. CD8 functions as a coreceptor in concert with TCR for binding the MHC class I/peptide complex. The HIV-2 envelope glycoprotein binds CD8  $\alpha$  chain (but not  $\beta$  chain).**CD8****Clone:** 144B**Catalog No.:** Mob117 Concentrated  
PDM094 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD8 antibody (PDM094).***Immunogen:** Synthetic peptide comprised of 13 C terminal amino acids from the cytoplasmic domain of the CD8 molecule.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody reacts specifically with a 32 kDa protein similar to the CD8 molecule. This antibody stains cytotoxic/suppressor T cells and shows staining patterns similar to clustered CD8 monoclonal antibodies.**CD10****Clone:** EP195**Catalog No.:** RMAB037 Concentrated  
RMPD037 Prediluted*Formalin fixed paraffin embedded renal cell carcinoma stained with CD10 antibody (RMAB037).***Immunogen:** A recombinant fragment corresponding to residues in human CD10 protein.**Isotype:** Rabbit IgG**Positive Control:** Tonsil, Renal Cell Carcinoma, Follicular Lymphoma**Cellular Localization:** Cytoplasmic Cell Membrane**Specificity:** The common acute lymphoblastic leukemia antigen (CALLA/CD10) is a single-pass type II transmembrane metallo-endopeptidase that cleaves and inactivates a variety of peptide growth factors important for signal transduction including the enkephalins, bombesin and substance P. CD10 is expressed by a number of hematopoietic cells such as immature T and B cells, B cells of the germinal centers of lymphoid follicles and granulocytes. It also reacts with a variety of non-hematopoietic cells, including epithelial cells in GI tract and kidney tubular. In liver, the bile canaliculi shows a moderate to strong staining. CD10 has been used for the identification and classification of certain types of malignant lymphoma and leukemia. CD10 is expressed in a high percentage of cases of acute lymphoblastic leukemia, follicular lymphoma, Burkitt lymphoma, some hematopoietic tumors, and chronic myelogenous leukemias in lymphoid blast crisis. It is also known to be a marker of endometrial stromal cells. It is helpful in differentiating endometrial stromal sarcoma (ESS) from uterine cellular leiomyoma (UCL) and uterine leiomyosarcoma (ULS).Diagnostic BioSystems'  
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## CD10

Clone: 56C6

Catalog No.: Mob240 Concentrated  
PDM107 Prediluted



Formalin fixed paraffin embedded human renal cell carcinoma stained with CD10 (PDM107).

**Immunogen:** Prokaryotic recombinant protein corresponding to the external domain of the CD10 glycoprotein.

**Isotype:** IgG1

**Positive Control:** Tonsil, Renal Cell Carcinoma

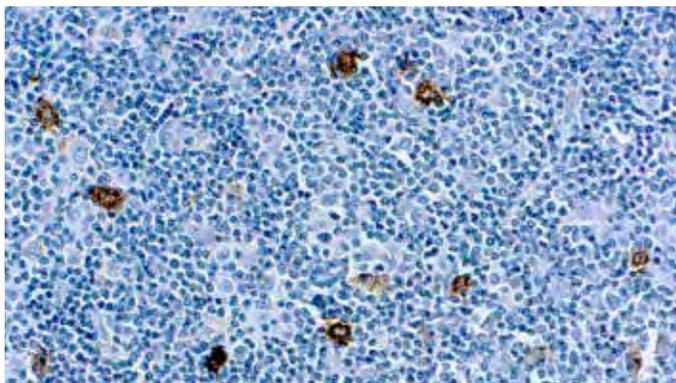
**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to human CD10 antigen of 100 kDa, also known as common acute lymphocytic leukemia antigen (CALLA). CD10 antigen has been identified on the surface of early lymphoid progenitor cells, immature B cells within adult bone marrow, and germinal center B cells within lymphoid tissue.

## CD15

Clone: MMA; same as LeuM1

Catalog No.: Mob365 Concentrated  
PDM127 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD15 antibody (Mob365).

**Immunogen:** BALB/C mice were injected with U937 histiocytic cell line.

**Isotype:** IgM, kappa

**Positive Control:** Tonsil

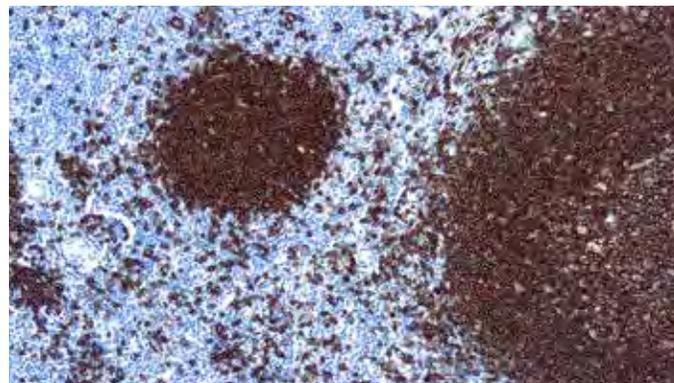
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with a 220 kDa protein. CD15 plays a role in mediating phagocytosis, bactericidal activity and chemotaxis. It is present on >95% of granulocytes including neutrophils and eosinophils and to a lesser degree on monocytes. CD15 is also expressed in Reed-Sternberg cells and some epithelial cells. CD15 is very useful in the identification of Hodgkin disease.

## CD20

Clone: L26

Catalog No.: Mob004 Concentrated  
PDM004 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD20 antibody (Mob004).

**Immunogen:** BALB/C mice were injected with human tonsil B cells.

**Isotype:** IgG2a, kappa

**Positive Control:** Tonsil

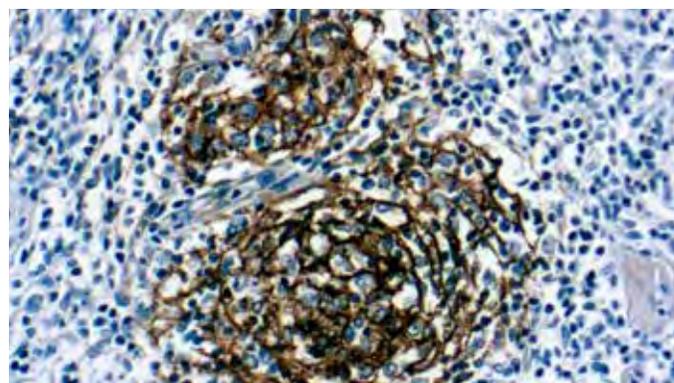
**Cellular Localization:** Cell membrane and cytoplasm

**Specificity:** This antibody is specific to a 33 kDa polypeptide present on the majority of B cells in peripheral blood and lymphoid tissue. No reactivity with other hematopoietic cells has been observed.

## CD21, B Cell

Clone: 1F8

Catalog No.: Mob028 Concentrated  
PDM122 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD21 antibody (Mob028).

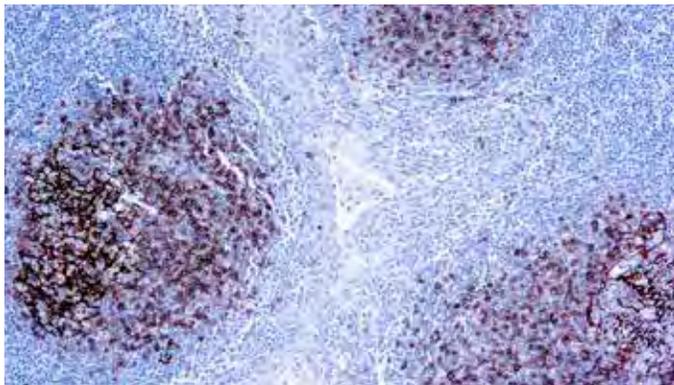
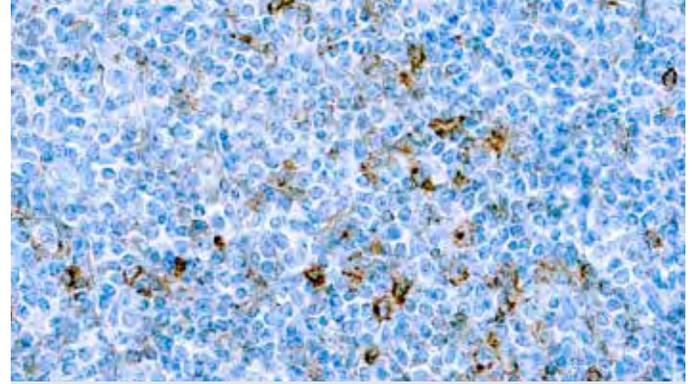
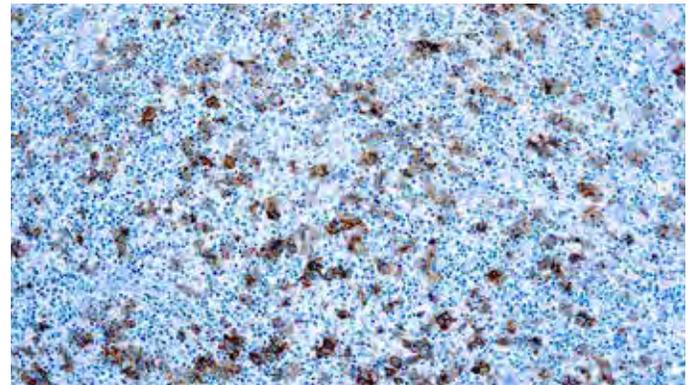
**Immunogen:** Purified receptor for the C3d fragment of the third complement component CR2, from human tonsil.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane

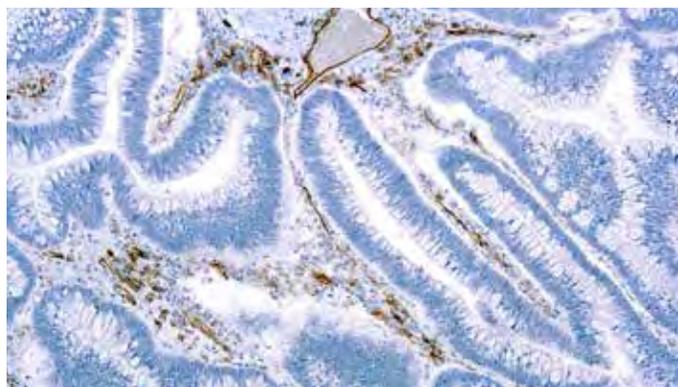
**Specificity:** This antibody reacts with CD21 antigen of MW 145 kDa, present on the surface of mature B cells. The antigen is present at high density on follicular dendritic cells. CD21 is involved in transmitting growth-promoting signals to the interior of the B cell.

**CD23****Clone:** 1B12**Catalog No.:** Mob294 Concentrated  
PDM143 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD23 antibody (Mob294).***Immunogen:** Prokaryotic recombinant fusion protein corresponding to the external domain of the CD23 molecule.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to a membrane glycoprotein of 45 kDa, designated as CD23. CD23 is found on a subpopulation of peripheral blood cells, B lymphocytes, and on EBV transformed B lymphoblastoid cell lines. Expression of CD23 has been detected in neoplastic cells from cases of B cell chronic lymphocytic leukemias.**CD23****Clone:** SP23**Catalog No.:** RMAB013 Concentrated  
RMPD013 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD23 antibody (RMAB013).***Immunogen:** Recombinant protein encoding human CD23 48-248 aa.**Isotype:** IgG**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody recognizes CD23. CD23 is a 45kDa glycoprotein which is present on a subpopulation of freshly isolated peripheral blood and tonsil B cells and strongly expressed on EBV-transformed B lymphoblasts. The CD23 molecule is identical to the low affinity IgE receptor found on B cells. Expression of CD23 has been detected in neoplastic cells from cases of B cell chronic lymphocytic leukemia and some cases of centroblastic/centrocytic lymphoma.**CD25/IL-2R  $\alpha$** **Clone:** IL2R.1**Catalog No.:** Mob254 Concentrated  
PDM144 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD25 antibody (Mob254).***Immunogen:** BALB/C mice were injected with recombinant human interleukin-2 receptor.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to a 55 kDa protein known as interleukin 2-receptor  $\alpha$  (IL-2R  $\alpha$ ). IL-2R  $\alpha$  is over expressed on the surface of activated T cells, HTLV-1 or HTLV-2 positive T cell lines, and moderately expressed on activated B cells, NK-cells, and macrophages.**CD30/Ki-1 Antigen****Clone:** Ber-H2**Catalog No.:** Mob032 Concentrated  
PDM018 Prediluted*Formalin fixed paraffin embedded human Hodgkin's Lymphoma stained with CD30 antibody (Mob032).***Immunogen:** BALB/C mice were immunized with L428 cell line.**Isotype:** IgG1, kappa**Positive Control:** Tonsil, Hodgkin's Lymphoma**Cellular Localization:** Cell membrane**Specificity:** This antibody reacts with a 105 kDa glycoprotein expressed by Hodgkin and Reed-Sternberg cells and by tumor cells of a majority of large cell lymphomas. In normal lymphoid tissues, it reacts with a small population of large cells present around B cell follicles and sometimes at the rim of germinal centers.

### CD31, Endothelial Cell

Clone: JC/70A

Catalog No.: Mob034 Concentrated  
PDM020 Prediluted



Formalin fixed paraffin embedded human Colon Ca stained with CD31 antibody (Mob034).

**Immunogen:** BALB/C mice were immunized with membrane preparation of a spleen from a patient with hairy cell leukemia.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil, Colon Ca

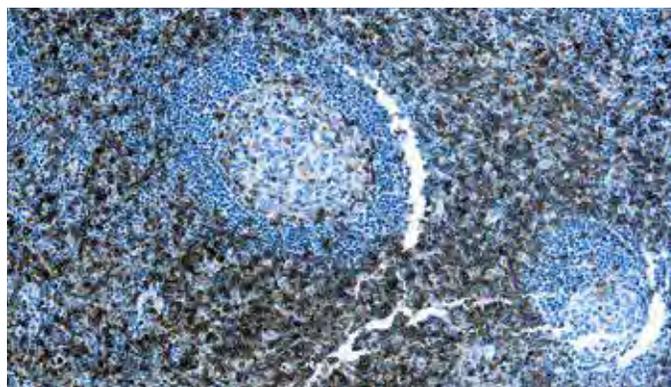
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with a 100 kDa glycoprotein expressed by endothelial cells and a 130 kDa glycoprotein present in platelets. It stains endothelial cells in normal as well as malignant tissues.

### CD43, T Cell

Clone: DF-T1

Catalog No.: Mob039 Concentrated  
PDM060 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD43 antibody (Mob039).

**Immunogen:** BALB/C mice were immunized with myeloblast cell line KG1.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

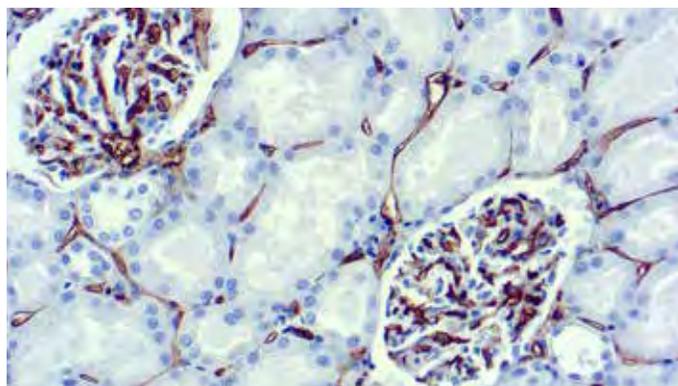
**Cellular Localization:** Cell Membrane

**Specificity:** This antibody reacts with an antigen expressed by normal and neoplastic T cells and myeloid lineage cells. It strongly stains T cells in the interfollicular areas of normal lymphoid tissues.

### CD34, Endothelial Cell

Clone: QBEND/10

Catalog No.: Mob098 Concentrated  
PDM050 Prediluted



Formalin fixed paraffin embedded human kidney stained with CD34 antibody (Mob098).

**Immunogen:** Endothelial cells (HUVE).

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil, kidney

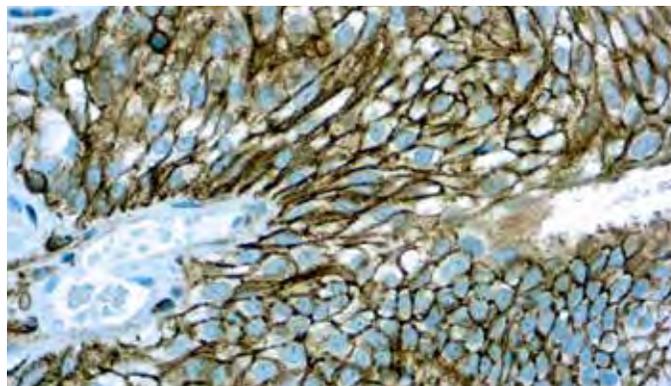
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with a glycoprotein of MW 110 kDa, present on the surface of hematopoietic cells i.e. myeloid and lymphoid progenitors. It stains the vascular endothelial cells.

### CD44/HCAM

Clone: 156-3C11

Catalog No.: Mob256 Concentrated  
PDM172 Prediluted



Formalin fixed paraffin embedded human bladder carcinoma stained with CD44, HCAM antibody (Mob256).

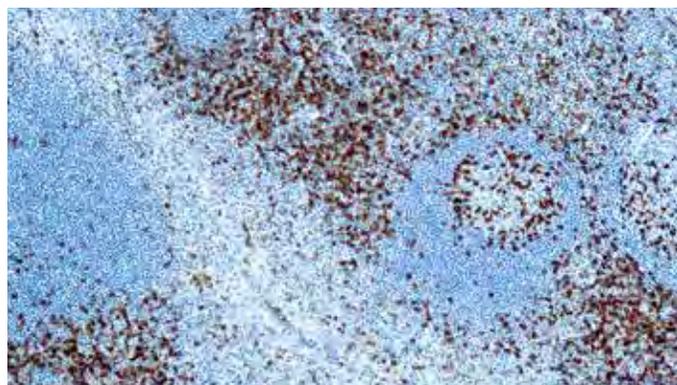
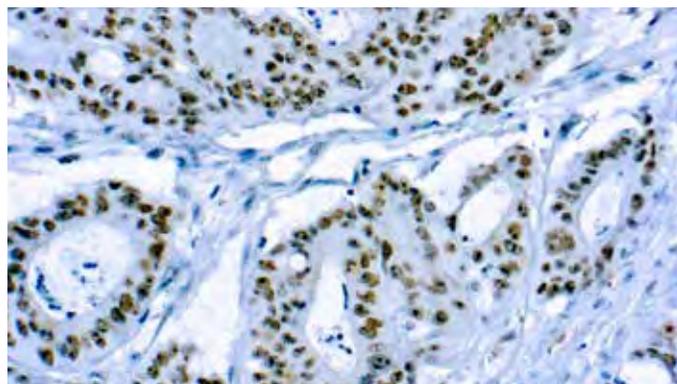
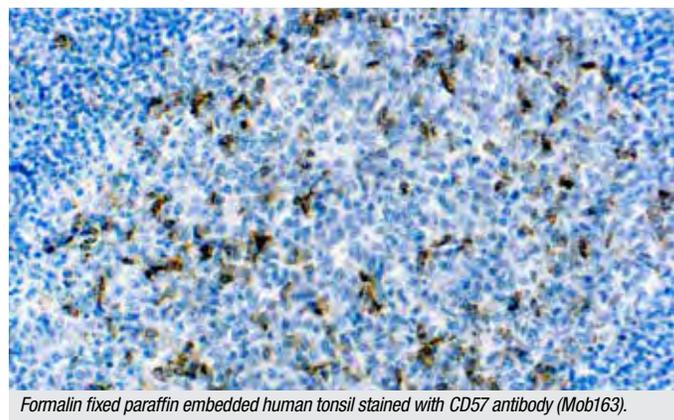
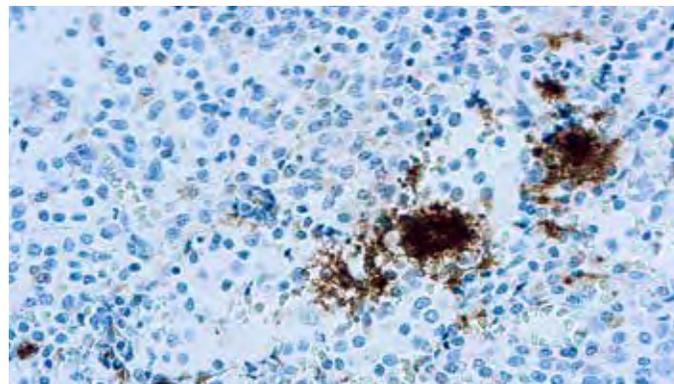
**Immunogen:** BALB/C mice were injected with stimulated human leukocytes.

**Isotype:** IgG2a

**Positive Control:** Tonsil, bladder carcinoma

**Cellular Localization:** Cell membrane

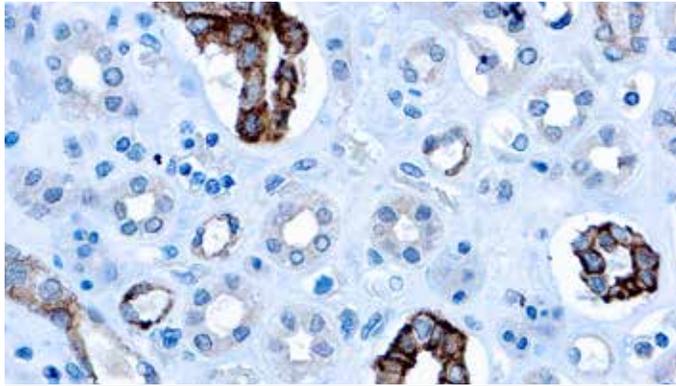
**Specificity:** This antibody is specific to a cell surface glycoprotein of 80-95 kDa, known as CD44. CD44 is expressed on the surface of lymphocytes, monocytes, and granulocytes. This antibody reacts with red cells pretreated with 2-aminoethyllyl isothiuronium bromide (AET).

**CD45RO, T Cell****Clone:** UCHL1**Catalog No.:** Mob043 Concentrated  
PDM015 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD45RO antibody (PDM015).***Immunogen:** BALB/C mice were immunized with IL-2 dependent T cell line, CA1.**Isotype:** IgG2a, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody reacts with a 180 kDa glycoprotein of the CD45 family, found on most thymocytes and activated T cells but only on a portion of the resting T cells. It reacts with most thymocytes, a subpopulation of resting cells within both the CD4 and CD8 subsets and mature activated T cells.**CD56/Neural Cell Adhesion Molecule-1 (NCAM-1)****Clone:** 123C3.D5**Catalog No.:** Mob261 Concentrated  
PDM110 Prediluted*Formalin fixed paraffin embedded human colon carcinoma stained with CD56/NCAM-1 antibody (Mob261).***Immunogen:** BALB/C mice were injected with membrane preparation of a small cell lung carcinoma.**Isotype:** IgG1, kappa**Positive Control:** Neuroblastoma**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to two proteins of 185 kDa and 145 kDa, identified as two isoforms of neural cell adhesion molecules (NCAM/CD56). NCAM is expressed on most neuroectodermal derived cell lines, tissues, and neoplasms such as retinoblastoma, medulloblastoma, astrocytoma, and neuroblastoma.**CD57****Clone:** NK-1**Catalog No.:** Mob163 Concentrated  
PDM130 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD57 antibody (Mob163).***Immunogen:** Human peripheral blood mononuclear cells.**Isotype:** IgM**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to a 110kDa human CD57 myeloid associated glycoprotein. It stains mononuclear cells with natural killer activity, neuroendocrine cells, and their tumors.**CD61/Platelet Glycoprotein IIIa****Clone:** Y2/51**Catalog No.:** Mob164 Concentrated  
PDM064 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD61 antibody (Mob164).***Immunogen:** BALB/C mice were immunized with PHA-stimulated human mononuclear cells.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody recognizes a glycoprotein of 110 kDa molecular weight present on human platelets and also reacts with megakaryocytes and megakaryoblasts. The antigen is also present on endothelium and osteoclasts. The glycoprotein IIIa molecule produced by endothelium cells is identical in sequence to platelet glycoprotein IIIa.

## CD63

Clone: NKI/C3 (same as MX-49.129.5)

Catalog No.: Mob301 Concentrated  
PDM212 Prediluted



Formalin fixed paraffin embedded human kidney stained with CD63 antibody (Mob301).

**Immunogen:** Smooth plasma membrane fraction of MeWo cells.

**Isotype:** IgG1, kappa

**Positive Control:** Melanoma

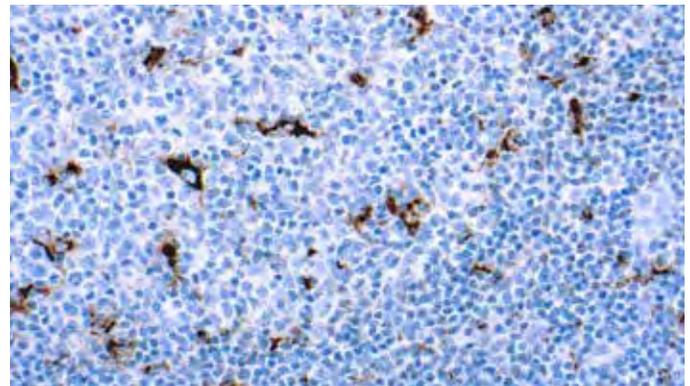
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to 53 kDa protein, expressed on activated platelets. CD63 is a lysosomal membrane glycoprotein that is translocated to plasma membrane after platelet activation. It is also expressed on granulocytes, B cells, and T cells.

## CD68/Macrophage

Clone: PG-M1

Catalog No.: Mob094 Concentrated  
PDM065 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD68 antibody (Mob094).

**Immunogen:** BALB/C mice were immunized with Gaucher's cells.

**Isotype:** IgG3, kappa

**Positive Control:** Tonsil

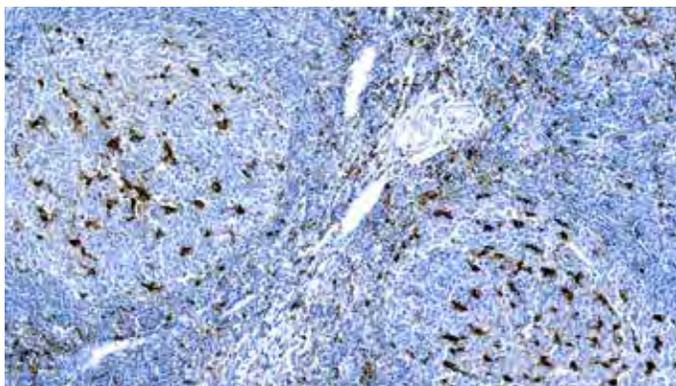
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with a glycoprotein of 110 kDa, expressed as an intracytoplasmic molecule. It stains macrophages in a wide variety of tissues. Myeloid precursor cells and peripheral granulocytes are negative. The PG-M1 differs from EMB11 (CD68) because of its non-reactivity with granulocytes and their precursor cells.

## CD68, Macrophage

Clone: KP1

Catalog No.: Mob167 Concentrated  
PDM066 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD68 Macrophage (PDM066).

**Immunogen:** Subcellular fraction of human alveolar macrophages.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

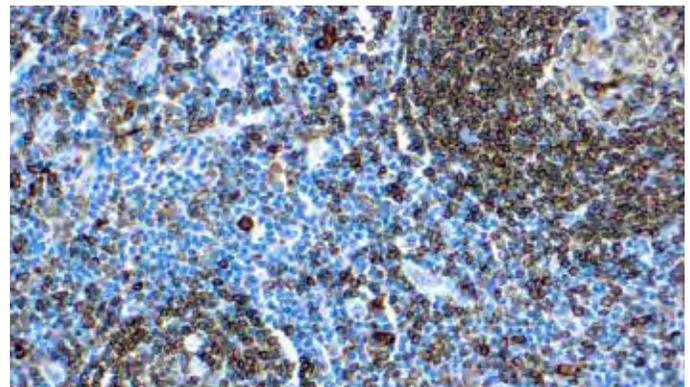
**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to macrophages in a wide variety of human tissues. It reacts with myeloid precursors and peripheral blood granulocytes. It also stains a cell population known as plasmacytoid T cells.

## CD74, Lymphoid Marker

Clone: LN2

Catalog No.: Mob168 Concentrated  
PDM033 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD74 antibody (Mob168).

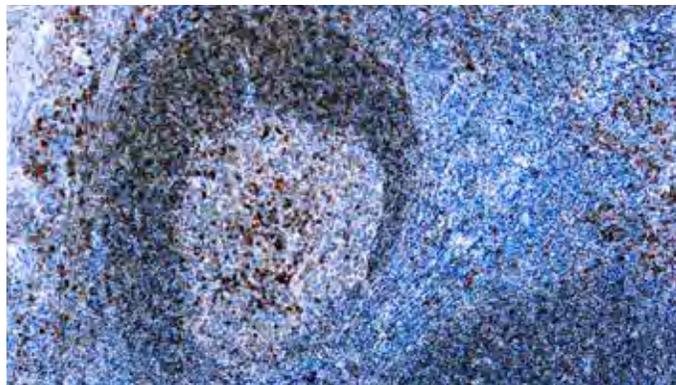
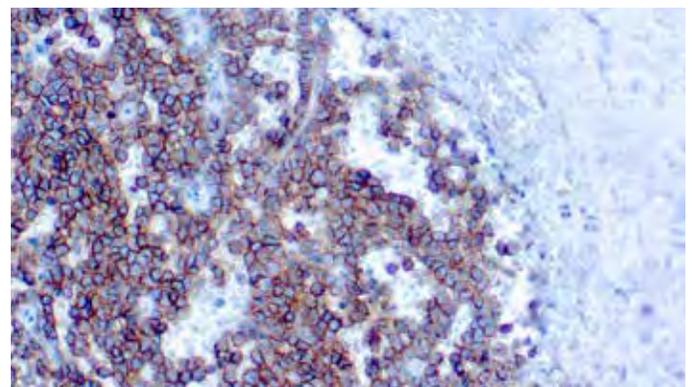
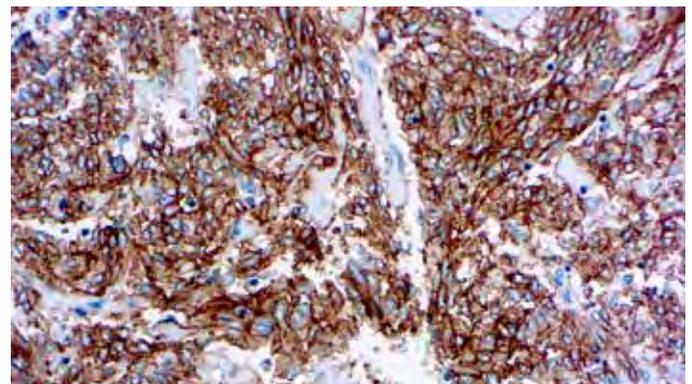
**Immunogen:** SU-DHL-4 lymphoma cells.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane

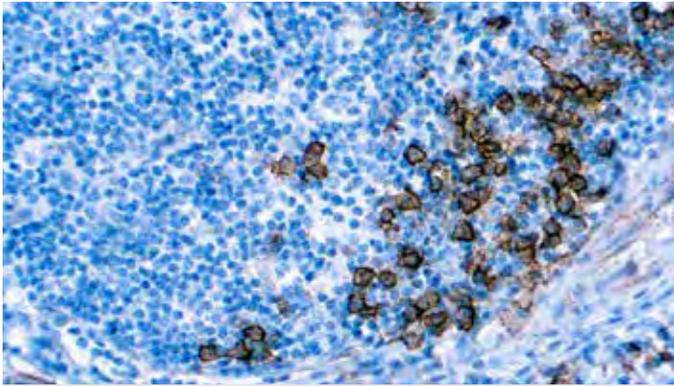
**Specificity:** This antibody is specific to CD74. This antibody can be used for the identification of B cell lymphomas and leukemias. It also stains activated neoplastic cells in T cell lymphomas and Reed-Sternberg cells.

**CD79a, Antigen****Clone:** HM47/A9**Catalog No.:** Mob242 Concentrated  
PDM125 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD79a Antigen (PDM125).***Immunogen:** Synthetic polypeptide consisting of the amino acid sequence GTYQDVGSLNIADVQ.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to human CD79a antigen complex, consisting of two polypeptides non-covalently associated with membrane-bound immunoglobulins on B cells. This complex of polypeptide and immunoglobulins constitute the B cell antigen receptor. The two components of this complex are designated CD79a and CD79b. The CD79a antigen appears at the pre-B cell stage, early in maturation and persists until the plasma cell stage. The CD79a antigen is found in majority of acute leukemias of precursor B cell type, in B cell lines, and B cell lymphomas.**CD79a, B Cell****Clone:** HM57**Catalog No.:** Mob118 Concentrated  
PDM271 Prediluted*Formalin fixed paraffin embedded human tonsil stained with CD79a antibody (Mob118).***Immunogen:** Synthetic peptide comprising of 202-216 C terminal amino acids part of mb-1 protein.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane**Specificity:** This antibody reacts specifically with B cells at the pre B cell stage. It stains a majority of acute leukemias of precursor B cell type, B cell lymphomas, and some myelomas. The mb-1 polypeptide along with B29 polypeptide forms an antigen receptor complex on the B cell, performing signal transduction and phosphorylation functions.**CD99/MIC2, Ewing's Sarcoma Marker****Clone:** H036-1.1**Catalog No.:** Mob262 Concentrated  
PDM106 Prediluted*Formalin fixed paraffin embedded human Ewing's sarcoma stained with CD99/MIC2 antibody (PDM106).***Immunogen:** BALB/C mice were injected with purified E-rosette forming cells from human peripheral blood lymphocytes.**Isotype:** IgM**Positive Control:** Ewing's sarcoma**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to a sialoglycoprotein of 27-32 kDa known as CD99 or MIC2 gene product. CD99 is expressed on the cell membrane of some lymphocytes, cortical thymocytes and granulosa cells of the ovary, Sertoli cells of the testis, pancreatic islet cells and some endothelial cells. Mature granulocytes express very little or no CD99.**CD117/c-Kit****Catalog No.:** RP063 Concentrated  
PDR045 Prediluted*Formalin fixed paraffin embedded human gastrointestinal stromal tumor stained with CD117/c-Kit antibody (RP063).***Immunogen:** A synthetic peptide from C-terminus of human CD117/c-Kit protein.**Positive Control:** Gastrointestinal stromal tumor**Cellular Localization:** Cell membrane, cytoplasm**Specificity:** This antibody reacts with a 145 kDa protein. CD117/c-Kit is a transmembrane receptor tyrosine kinase and is expressed in many tissues and cells. CD117/c-Kit is involved in the development of several lineages of stem cells, such as germ cells, neural crest derived melanocytes and hematopoietic precursor cells. This antibody can be used in the identification of gastrointestinal stromal tumors.*IVD only for markets outside the U.S. RUO for U.S. market.*

## CD138

Clone: EP201

Catalog No.: **RMAB040 Concentrated**  
**RMPD040 Prediluted**



Formalin fixed paraffin embedded human tonsil stained with CD138 (RMAB040).

**Immunogen:** A synthetic peptide corresponding to residues in human CD138 protein.

**Isotype:** Rabbit IgG

**Positive Control:** Tonsil, plasmacytoma

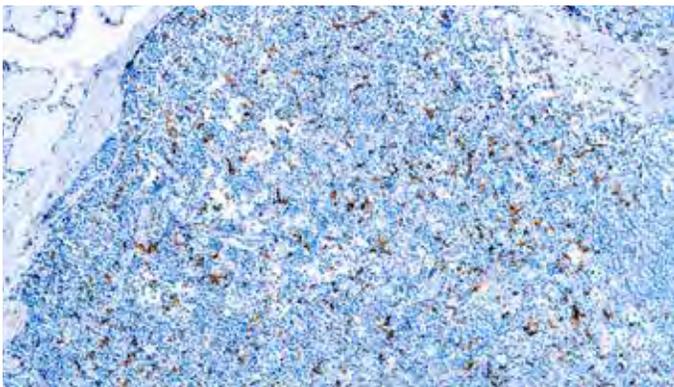
**Cellular Localization:** Membrane

**Specificity:** In the hematopoietic system, CD138 labels plasma cells. It is an excellent marker for plasmacytic differentiation within the spectrum of hematologic malignancy. Among non-hematolymphoid cells, CD138 reactivity is observed in many types of epithelial cells and stoma cells in both normal and tumor tissues.

## CD163

Clone: 10D6

Catalog No.: **Mob460 Concentrated**  
**PDM579 Prediluted**



Formalin fixed paraffin embedded human tonsil stained with CD163 antibody (Mob460).

**Immunogen:** Human CD163 antigen.

**Isotype:** IgG1

**Positive Control:** Tonsil

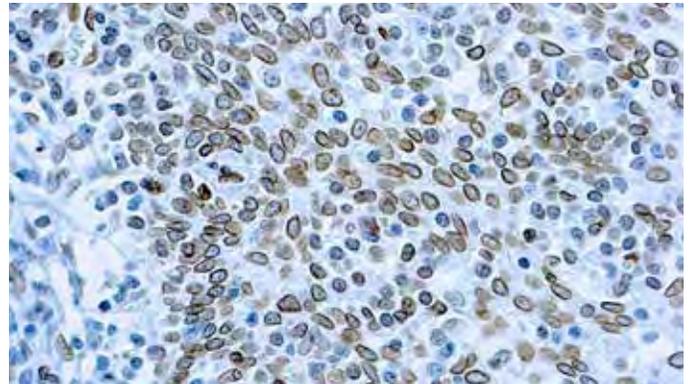
**Cellular Localization:** Membrane

**Specificity:** The CD163 molecule is a type I membrane protein also known as M130 antigen, Ber-Mac3, Ki-M8 or SM4. CD163 protein is restricted in its expression to the monocytic/macrophage lineage. It is reported to be present on all circulating monocytes and most tissue macrophages except those found in the mantle zone and germinal centers of lymphoid follicles, interdigitating reticulum cells and Langerhans cells. In addition, multinucleated cells within inflammatory lesions are reported not to express CD163 protein. The protein is upregulated by glucocorticoids and downregulated by the immunosuppressant cyclosporin A and by phorbol esters.

## Cdc25A

Clone: DCS-120

Catalog No.: **Mob337 Concentrated**



Formalin fixed paraffin embedded human tonsil stained with Cdc25A antibody (Mob337).

**Immunogen:** BALB/C mice were injected with purified recombinant Cdc25A.

**Isotype:** IgG2a

**Positive Control:** Tonsil

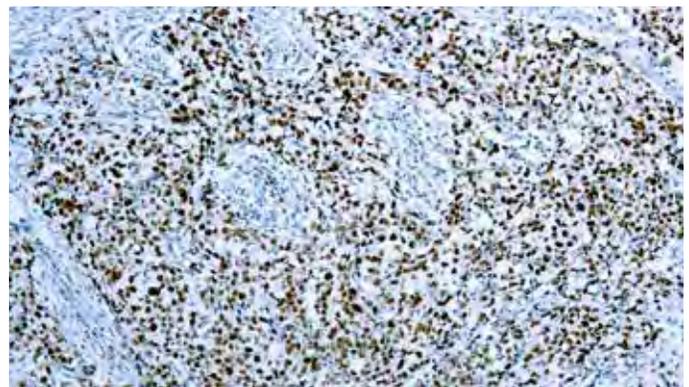
**Cellular Localization:** Nuclear membrane

**Specificity:** This antibody reacts with a 65 kDa protein known as Cdc25A. The activity of cyclin-dependent kinases in cell cycle is regulated by the phosphorylation status, which is controlled by the antagonistic action of wee 1 kinase and Cdc25 phosphatases. Three Cdc25 genes are present in human cells: Cdc25A, Cdc25B and Cdc25C. Cdc25A and Cdc25B are expressed throughout the cell cycle, with peak expression in G1 for Cdc25A and in both G1-S phase and G2 for Cdc25B. Cdc25C is mainly expressed in G2 phase.

## Cdc47/MCM7

Clone: 47DC141

Catalog No.: **Mob340 Concentrated**  
**PDM340 Prediluted**



Formalin fixed paraffin embedded human breast carcinoma stained with Cdc47/MCM7 antibody (Mob340).

**Immunogen:** BALB/C mice were injected with recombinant human cdc47 protein.

**Isotype:** IgG1

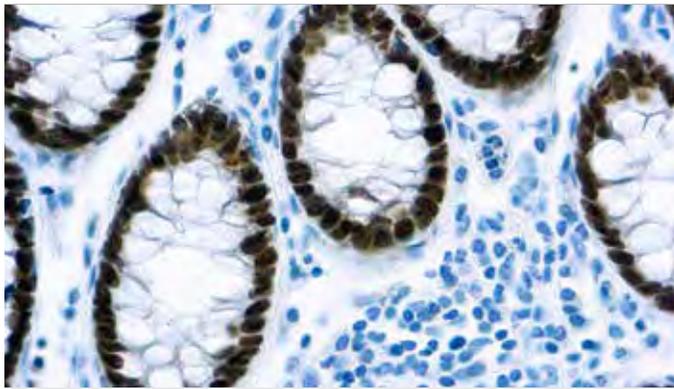
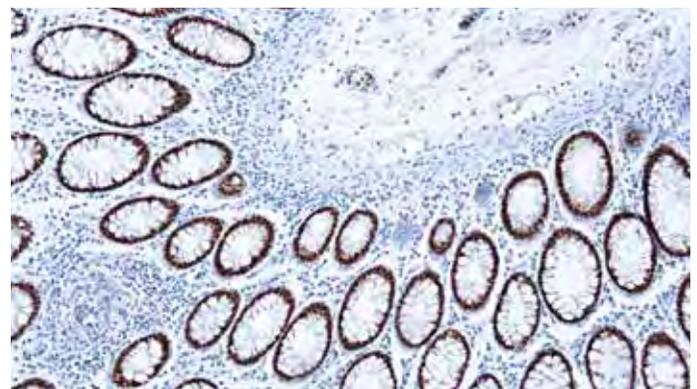
**Positive Control:** Breast carcinoma

**Cellular Localization:** Nuclear

**Specificity:** This antibody reacts with an 80 kDa protein known as hCdc47. hCdc47 is a member of the MCM family, which allows DNA to replicate once per cell cycle. Expression of Cdc47 protein has been found in the nuclei of proliferative components of normal lymph nodes, bone marrow, epidermis and mucosa. Malignant tumors from several organs contain more nuclear hCdc47-positive cells than their normal counterparts.

**CONCENTRATED ANTIBODIES KEY:** Mob = Mouse Monoclonal | RMAB = Rabbit Monoclonal | RP = Rabbit Polyclonal

**CONCENTRATED VOLUME KEY:** MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**CDX2****Clone:** EP25**Catalog No.:** RMAB059 Concentrated  
RMPD059 Prediluted*Formalin fixed paraffin embedded colon carcinoma stained with CDX2 antibody (RMAB059).***Immunogen:** A synthetic peptide corresponding to residues near the C-terminus of human Cdx2 protein.**Isotype:** Rabbit IgG**Positive Control:** Colon, colon adenocarcinoma**Cellular Localization:** Nuclear**Specificity:** The caudal-related homeodomain protein 2, Cdx2, is a transcription factor which is expressed in the intestine and is thought to play an important role in the proliferation and differentiation of intestinal epithelial cells. The Cdx2 protein is expressed in primary and metastatic colorectal carcinomas, intestinal metaplasia of the stomach and intestinal type gastric cancer. In human colorectal cancer, the expression of both Cdx2 and carbonic anhydrase 1, a gene regulated by Cdx2, is reduced or absent. Cdx2 is one of the important regulators in defining pathways for coordinate control of drug metabolism in the gastrointestinal tract.**CDX2****Clone:** AMT28**Catalog No.:** Mob432 Concentrated  
PDM187 Prediluted*Formalin fixed paraffin embedded human colon stained with Cdx2 antibody (Mob432).***Immunogen:** Prokaryotic recombinant protein corresponding to the 180 amino acid N-terminal region of the human cdx2 molecule.**Isotype:** IgG1, kappa**Positive Control:** Colon cancer**Cellular Localization:** Nuclear**Specificity:** Cdx2 is a caudal type homeobox gene that encodes an intestine-specific transcription factor expressed early in intestinal development and may be involved in the regulation of proliferation and differentiation of intestinal epithelial cells. It is expressed in the nuclei of epithelial cells throughout the intestine, from duodenum to rectum. The cdx2 protein is expressed in primary and metastatic colorectal carcinomas and has also been demonstrated in intestinal metaplasia of the stomach and intestinal-type gastric cancer, while it is not expressed in the normal gastric mucosa. Studies have shown that cdx2 is a superior marker compared to CK20.

## Diagnostic BioSystems' IHC Detection Systems

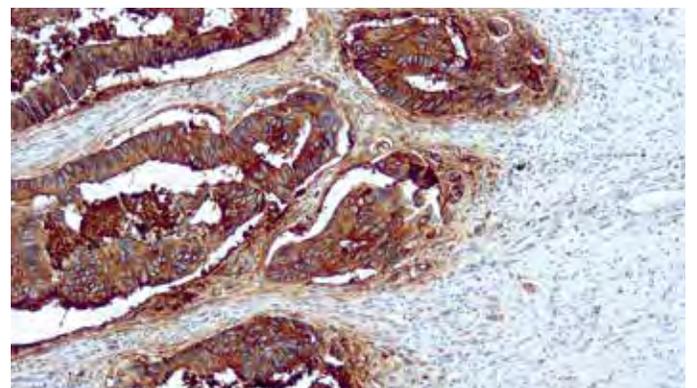
### Polymer Detection System

Suitable for demonstrating antigens in formalin-fixed paraffin embedded tissues and cryostat sections.

### Streptavidin Biotin Detection System

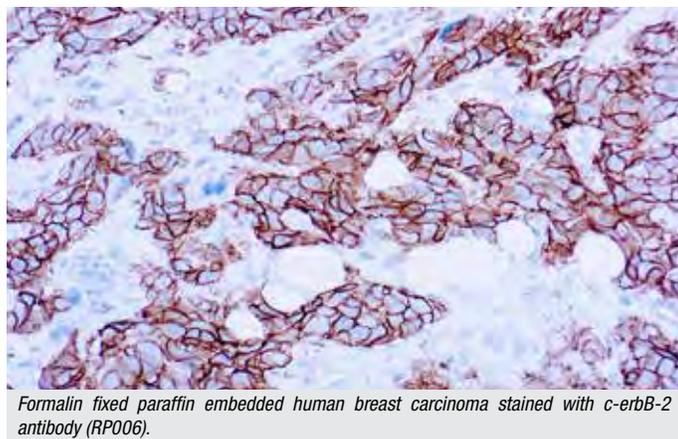
Convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

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**CEA (Carcinoembryonic Antigen)****Clone:** COL-1**Catalog No.:** Mob008 Concentrated  
PDM005 Prediluted*Formalin fixed paraffin embedded human colon Ca stained with CEA antibody (Mob008).***Immunogen:** BALB/C mice were injected with extract of colon carcinoma cells.**Isotype:** IgG2a, kappa**Positive Control:** Colon Carcinoma**Cellular Localization:** Cytoplasmic and luminal membrane**Specificity:** This antibody is a member of a family of complex antigens which also includes non-specific cross-reacting antigens (NCA). This antibody stains specific regions of CEA. It reacts with colorectal adenocarcinomas but does not show any staining with polymorphonuclear neutrophils and erythrocytes.

## c-erbB-2/Oncoprotein

Catalog No.: **RP006 Concentrated**  
**PDR003 Prediluted**



Formalin fixed paraffin embedded human breast carcinoma stained with c-erbB-2 antibody (RP006).

**Immunogen:** Keyhole limpet hemocyanin conjugated synthetic human peptide from c-erbB-2 oncoprotein.

**Positive Control:** Breast carcinoma

**Cellular Localization:** Cell membrane

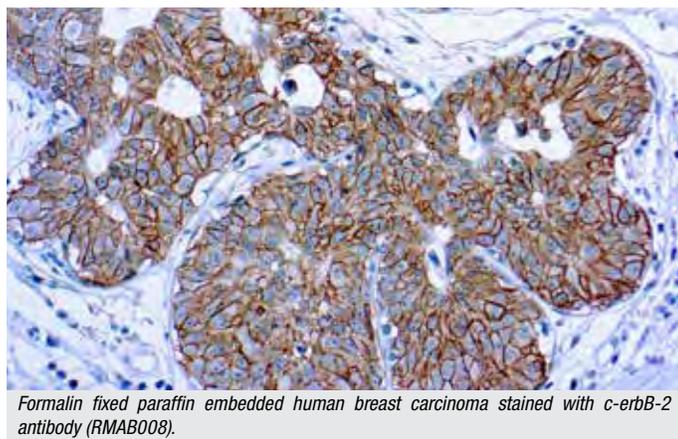
**Specificity:** This antibody reacts with the c-erbB-2 oncoprotein, a 190 kDa protein. The proto-oncogene for c-erbB-2 is located on the human chromosome 17, band 21. It has structural similarities to EGFR. Several studies have indicated that c-erbB-2 may be a good indicator of the prognosis of human carcinomas in the breast, ovary, uterus and gastrointestinal tract.

IVD only for markets outside the U.S. RUO for U.S. market.

## c-erbB-2/Oncoprotein

Clone: **SP3**

Catalog No.: **RMAB008 Concentrated**  
**RMPD008 Prediluted**



Formalin fixed paraffin embedded human breast carcinoma stained with c-erbB-2 antibody (RMAB008).

**Immunogen:** Recombinant protein encoding extracellular domain of human c-erbB2.

**Isotype:** IgG

**Positive Control:** Breast carcinoma

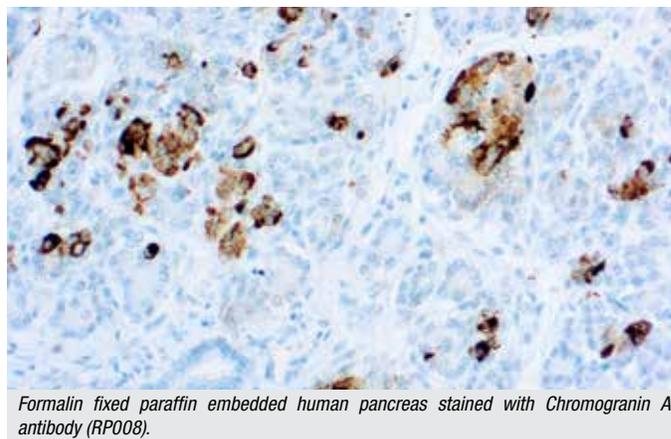
**Cellular Localization:** Cell membrane

**Specificity:** This antibody recognizes a c-erbB-2 protein, which is a receptor tyrosine kinase of the c-erbB family. It is closely related in structure to the epidermal growth factor receptor. c-erbB-2 oncoprotein is detectable in a subset of breast and other adenocarcinomas, as well as transitional cell carcinomas. In the case of breast cancer, expression determined by immunohistochemistry has been shown to be associated with poor prognosis.

IVD only for markets outside the U.S. RUO for U.S. market.

## Chromogranin A

Catalog No.: **RP008 Concentrated**  
**PDR061 Prediluted**



Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody (RP008).

**Immunogen:** C-terminal half of chromogranin A was purified from urine of patients with carcinoid syndrome.

**Positive Control:** Pancreas

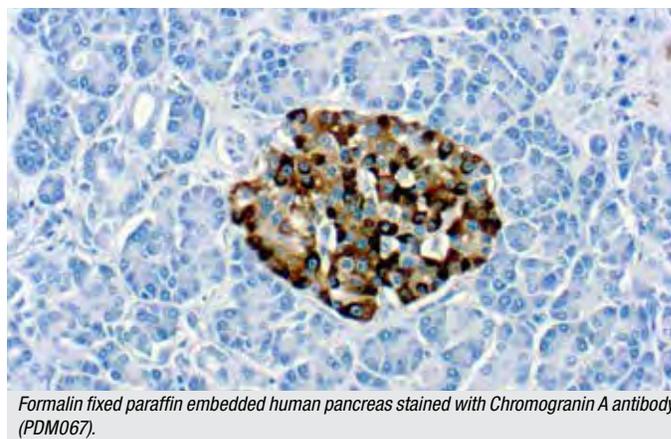
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human chromogranin A in the neuroendocrine cells and neural tissues. It does not recognize the epitopes located on the N-terminal half of the chromogranin A molecule.

## Chromogranin A

Clone: **LK2H10**

Catalog No.: **Mob048 Concentrated**  
**PDM067 Prediluted**



Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody (PDM067).

**Immunogen:** BALB/C mice were immunized with human pheochromocytoma.

**Isotype:** IgG1, kappa

**Positive Control:** Pancreas

**Cellular Localization:** Cytoplasmic

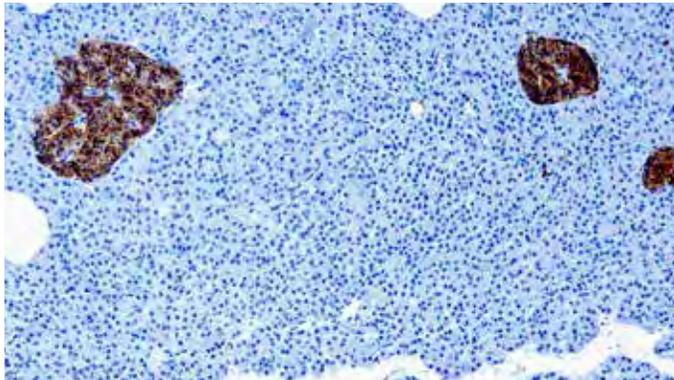
**Specificity:** Chromogranin A is a 439 amino acid protein present in secretory granules of a wide variety of endocrine cells and neurons. A positive staining is seen in the secretory granules of parathyroid, adrenal medulla, anterior pituitary gland and Langerhans islets of pancreas. This antibody stains a variety of neuroendocrine tumors.

**CONCENTRATED ANTIBODIES KEY:** Mob = Mouse Monoclonal | RMAB = Rabbit Monoclonal | RP = Rabbit Polyclonal

**CONCENTRATED VOLUME KEY:** MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**Chromogranin A**

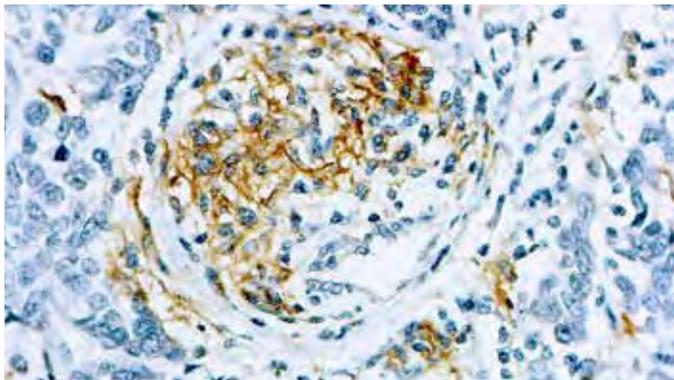
Clone: SP12

Catalog No.: **RMAB015 Concentrated**  
**RMPD015 Prediluted**

Formalin fixed paraffin embedded human pancreas stained with Chromogranin A antibody (RMAB015).

**Immunogen:** Recombinant protein encoding human Chromogranin A.**Isotype:** IgG**Positive Control:** Pancreas**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes Chromogranin A. Chromogranin A (a protein of 439 amino acid which is encoded on chromosome 14) is present in neuroendocrine cells throughout the body, including the neuroendocrine cells of the large and small intestine, adrenal medulla and pancreatic islets. It is an excellent marker for carcinoid tumors, pheochromocytomas, paragangliomas, and other neuroendocrine tumors. Coexpression of chromogranin A and neuron specific enolase (NSE) is common in neuroendocrine neoplasms.

**Claudin 1**Catalog No.: **RP153 Concentrated**

Formalin fixed paraffin embedded human skin stained with Claudin 1 antibody (RP153).

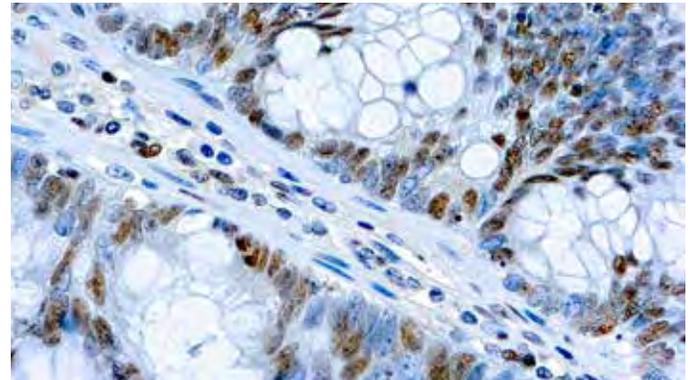
**Immunogen:** A synthetic peptide corresponding to C-terminal of human claudin 1.**Positive Control:** Breast carcinoma, skin**Cellular Localization:** Cell membrane, cytoplasmic

**Specificity:** Claudin 1-8 proteins are a family of transmembrane proteins associated with tight junctions. Tight junctions are specialized regions of cell to cell contact, made up of a network of strands to act as a molecular gasket for preventing the leakage of ions, water etc., between cells. They are abundant in luminal epithelial sheets where they maintain epithelial cell polarity. Different tissues exhibit different claudin composition.

IVD only for markets outside the U.S. RUO for U.S. market.

**c-myc**

Clone: 9E10

Catalog No.: **Mob231 Concentrated**  
**PDM211 Prediluted**

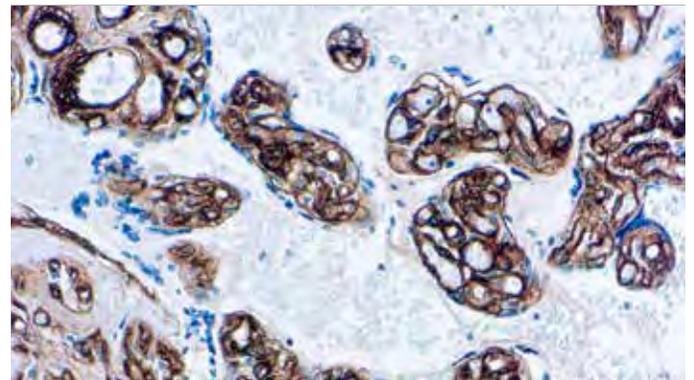
Formalin fixed paraffin embedded human colon adenocarcinoma stained with c-myc (Mob231).

**Immunogen:** Synthetic peptide corresponding to residues 408-439 of the human p62c-myc protein.**Isotype:** IgG1**Positive Control:** Breast carcinoma**Cellular Localization:** Nuclear

**Specificity:** This antibody recognizes an epitope located in the amino acid residue 410-419 of human oncogene product c-myc. This antibody reacts with both components of the p62 and p64 c-myc.

**Collagen Type IV**

Clone: COL-94

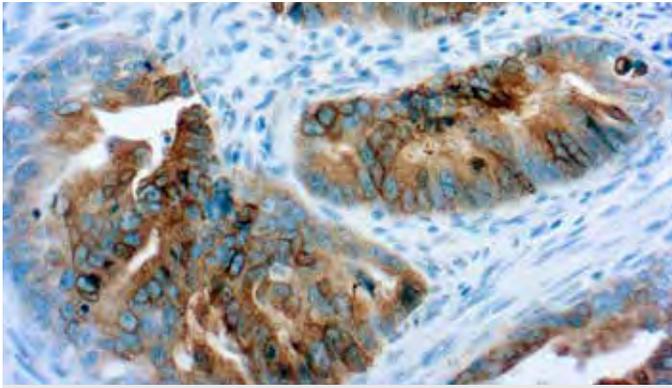
Catalog No.: **Mob229 Concentrated**  
**PDM276 Prediluted**

Formalin fixed paraffin embedded human placenta stained with Collagen Type IV antibody (Mob229).

**Immunogen:** Human collagen type IV.**Isotype:** IgG1**Positive Control:** Skin**Cellular Localization:** Basement membrane

**Specificity:** This antibody recognizes collagen type IV epitope located on the  $\alpha 1$  and/or  $\alpha 2$  chains of human collagen type IV. This antibody shows no cross-reactivity with collagen types I, II, III, V, VI and VII and does not react with human vitronectin, fibronectin or chondroitin sulfate A, B and C.

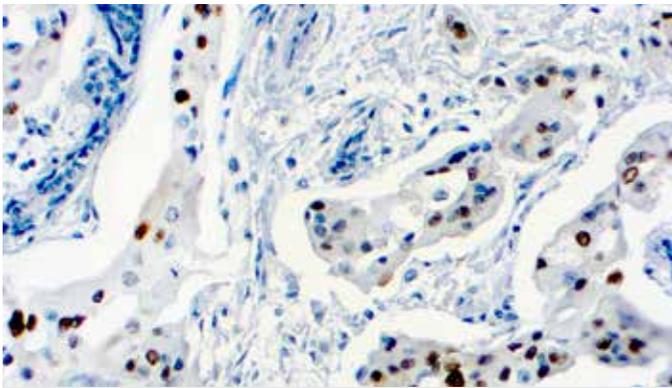
**COX-2 (Cyclooxygenase-2)**  
Catalog No.: **RP111 Concentrated**



Formalin fixed paraffin embedded colon carcinoma stained with COX-2 antibody (RP111).

**Immunogen:** Recombinant protein corresponding to C-terminus of rat COX2.  
**Positive Control:** Lung and colon carcinoma  
**Cellular Localization:** Cytoplasmic, membrane  
**Specificity:** This antibody reacts with a 70 kDa protein. COX-2 (Cyclooxygenase-2) is an inducible enzyme. It is involved in the response of cells to growth factors, tumor promoters and cytokines that induce its expression. COX-2 expression markedly increased in 85-90% of human colorectal adenocarcinoma whereas COX-1 levels remained unchanged.

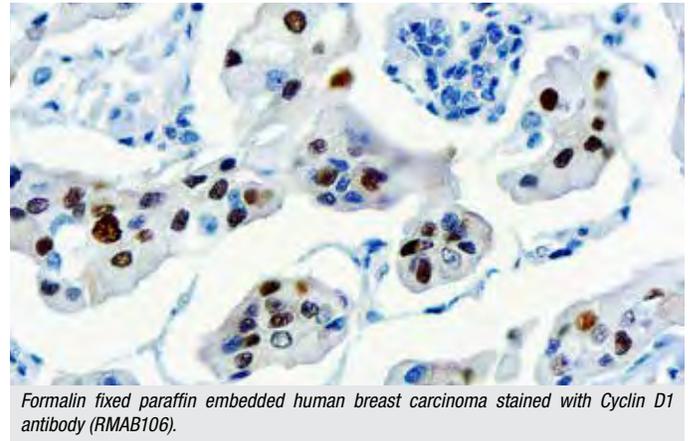
**Cyclin D1**  
Clone: **SP4**  
Catalog No.: **RMAB003 Concentrated**  
**RMPD003 Prediluted**



Formalin fixed paraffin embedded human Breast stained with Cyclin D1 (RMAB003).

**Immunogen:** A synthetic peptide from C-terminus of human cyclin D1.  
**Isotype:** IgG  
**Positive Control:** Breast carcinoma  
**Cellular Localization:** Nuclear  
**Specificity:** Cyclin D1 or PRAD-1 or bcl-1 is one of the key cell cycle regulators, and functions in association with cdk4 and/or cdk6 by phosphorylating the Rb protein. It is a putative proto-oncogene overexpressed in a wide variety of human neoplasms including mantle cell lymphomas (MCL).

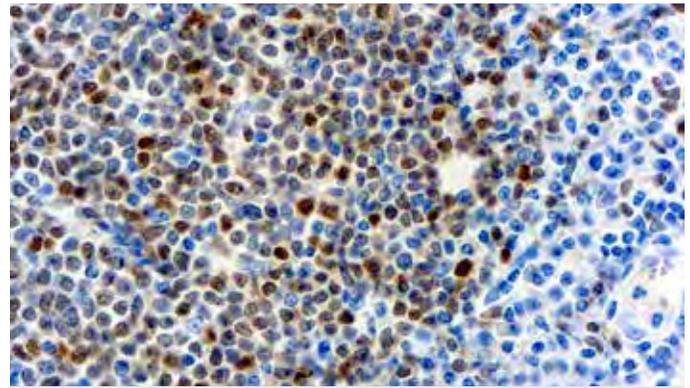
**Cyclin D1**  
Clone: **EP12**  
Catalog No.: **RMAB106 Concentrated**  
**RMPD106 Prediluted**



Formalin fixed paraffin embedded human breast carcinoma stained with Cyclin D1 antibody (RMAB106).

**Immunogen:** A synthetic peptide corresponding to residues near C-terminus of human Cyclin D1 protein.  
**Isotype:** Rabbit IgG  
**Positive Control:** Breast carcinoma  
**Cellular Localization:** Nuclear  
**Specificity:** Amplification or overexpression of Cyclin D1 plays a pivotal role in the development of various human cancers including breast cancer, colon cancer, melanoma, prostate cancer and lymphoma. It is useful to differentiate mantle cell lymphoma from small cleaved cell lymphoma.

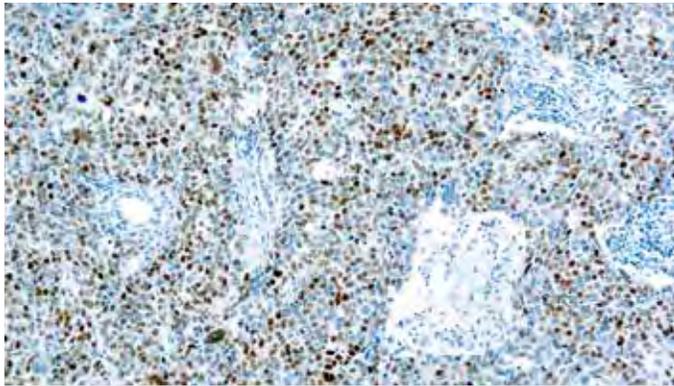
**Cyclin D1**  
Clone: **DCS-6**  
Catalog No.: **Mob178 Concentrated**  
**PDM046 Prediluted**



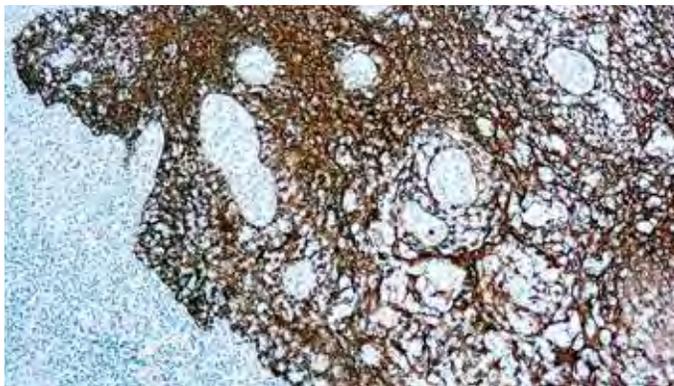
Formalin fixed paraffin embedded mantle cell lymphoma stained with Cyclin D1 antibody (Mob178).

**Immunogen:** Prokaryotic recombinant fusion protein corresponding to human cyclin D1.  
**Isotype:** IgG2a  
**Positive Control:** Breast carcinoma  
**Cellular Localization:** Nuclear  
**Specificity:** This antibody is specific to human cyclin D1. The cyclin D1 gene is located on 11q13 and has been shown to be amplified in a variety of tumors. Maximum expression of cyclin D1 occurs at a critical point in mid to late G1 phase of the cell cycle.

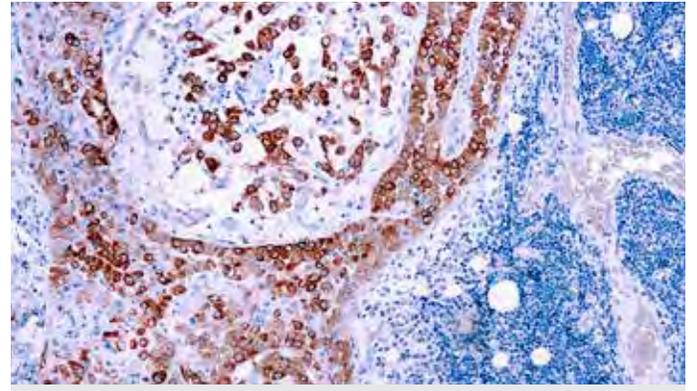
Primary Antibodies

**Cyclin E Protein****Clone:** HE12**Catalog No.:** Mob266 Concentrated  
PDM145 Prediluted

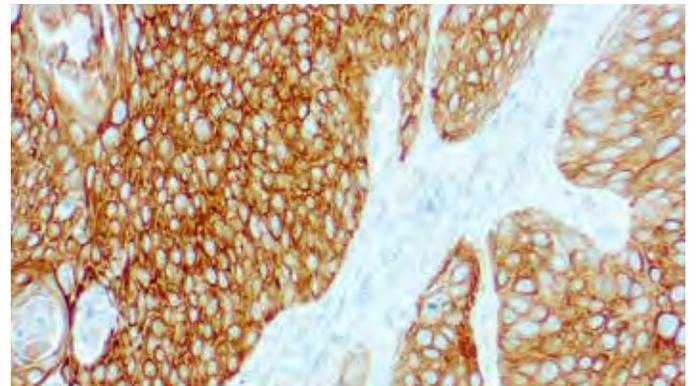
Formalin fixed paraffin embedded human breast carcinoma stained with Cyclin E antibody (Mob266).

**Immunogen:** Synthetic peptide corresponding to human cyclin E protein.**Isotype:** IgG1**Positive Control:** Breast carcinoma**Cellular Localization:** Nuclear**Specificity:** This antibody recognizes a doublet of 50 kDa and a single band of 42 kDa identified as cyclin E. Cyclin proteins are a family of related proteins, which control the progression of the eukaryotic cell cycle. Overexpression of cyclin E shortens the length of the G1 phase, accelerating progression of S phase. The activity of cyclin E is mediated through its activation of cyclin dependent kinase 2 (cdk2) protein and is modulated by the presence of tumor suppressor proteins such as p16.**Cytokeratin****Clone:** MNF116**Catalog No.:** Mob052 Concentrated  
PDM116 Prediluted

Formalin fixed paraffin embedded human tonsil stained with Cytokeratin antibody (PDM116).

**Immunogen:** BALB/C mice were immunized with crude extract of splenic cells from a nude mouse engrafted with MCF-7 cells.**Isotype:** IgG1, kappa**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes cytokeatin polypeptides ranging from 40 through 58kDa, corresponding to cytokeatins 5, 6, 8, 17 and 19. It shows a broad pattern of reactivity with human epithelial tissues from simple glandular epithelia to stratified squamous epithelia, like epidermis, mammary gland ducts and tracheal epithelium.**Cytokeratin 5****Clone:** XM26**Catalog No.:** Mob361 Concentrated  
PDM139 Prediluted

Formalin fixed paraffin embedded human colon stained with Cytokeratin 5 (PDM139).

**Immunogen:** BALB/C mice were injected with prokaryotic recombinant protein corresponding to 103 amino acid portion of C-terminal region of the human cytokeatin 5 molecule.**Isotype:** IgG1, kappa**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with cytokeatin 5 intermediate filament protein. Basal cells of human epidermis express acidic cytokeatin 14 and basic cytokeatin 5. Cytokeatin 5 is a 58 kDa protein, which is closely related to cytokeatin 6. Cytokeatin 5 and 6 are expressed in basal cell epithelioma, basal cells of prostate, urothelium, vagina, squamous cell carcinomas of skin, tongue, epiglottis and rectal-anal region. Cytokeatin 5 can be useful in the distinction of mesotheliomas from most adenocarcinomas.**Cytokeratin 5/6****Clone:** D5/16 B4**Catalog No.:** Mob362 Concentrated  
PDM123 Prediluted

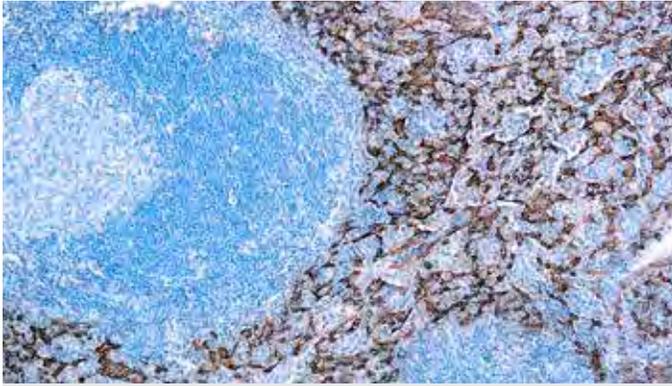
Formalin fixed paraffin embedded lung squamous cell carcinoma stained with Cytokeratin 5/6 (PDM123).

**Immunogen:** BALB/C mice were injected with cytokeatin 5.**Isotype:** IgG1, kappa**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** Cytokeatin 5 (58 kDa) is a high molecular weight, basic type of cytokeatin expressed in basal, intermediate and superficial cell layers of stratified epithelia as well as transitional epithelia, complex epithelia and in mesothelial cells and mesothelioma. Cytokeatin 6 (56 kDa) is also a high molecular weight, basic type cytokeatin expressed by proliferating squamous epithelium often paired with cytokeatin 16.

## Cytokeratin 5/14

Clone: XM26 + LL002

Catalog No.: Mob433 Concentrated  
PDM140 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 5/14 (Mob433).

**Immunogen:** XM26: prokaryotic recombinant protein corresponding to 103 amino acid portion of C-terminal region of the human cytokeratin 5 molecule. LL002: Synthetic peptide of the extreme C-terminal of human keratin-14.

**Isotype:** XM26, IgG1; LL002, IgG3

**Positive Control:** Skin, Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody cocktail reacts with cytokeratin 5 intermediate filament protein as well as the 50 kDa cytokeratin protein designated cytokeratin 14. Basal cells of human epidermis express acidic cytokeratin 14 and basic cytokeratin 5. Cytokeratin 5 is a 58 kDa protein, which is closely related to cytokeratin 6. Cytokeratin 5 and 6 are expressed in basal cell epithelioma, basal cells of prostate, urothelium, vagina, squamous cell carcinomas of skin, tongue, epiglottis and rectal-anal region. Cytokeratin 5 can be useful in the distinction of mesotheliomas from most adenocarcinomas.

Cytokeratin 14 belongs to the type A (acidic) subfamily of low MW cytokeratins and exists in combination with cytokeratin 15. This antibody can be useful to distinguish stratified epithelial cells from simple epithelial cells.



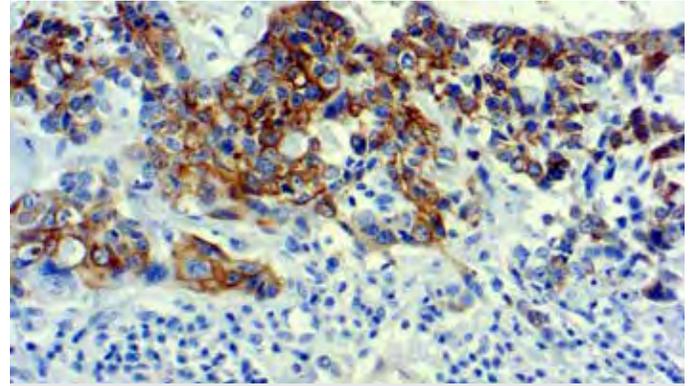
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## Cytokeratin 7

Clone: LP1K

Catalog No.: Mob563 Concentrated  
PDM563 Prediluted



Formalin fixed paraffin embedded breast carcinoma stained with Cytokeratin 7 (Mob563).

**Immunogen:** Sonicated cytoskeleton fractions from SV40 transformed neonatal keratinocytes.

**Isotype:** IgG1

**Positive Control:** Tonsil

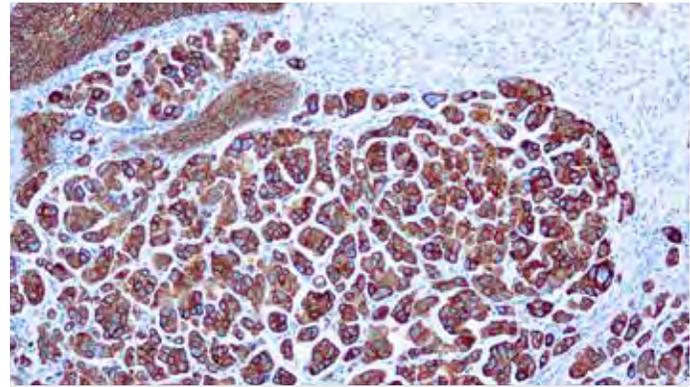
**Cellular Localization:** Cytoplasm

**Specificity:** Cytokeratin 7 is expressed in epithelial cells of ovary, lung and breast. It is often used in conjunction with cytokeratin 20 and CDX-2 in distinguishing pulmonary, ovarian and breast carcinomas (CK7+) from most colon carcinomas (CK7-).

## Cytokeratin 7

Clone: OV-TL 12/30

Catalog No.: Mob057 Concentrated  
PDM097 Prediluted



Formalin fixed paraffin embedded human lung adenocarcinoma stained with Cytokeratin 7 antibody (PDM 097).

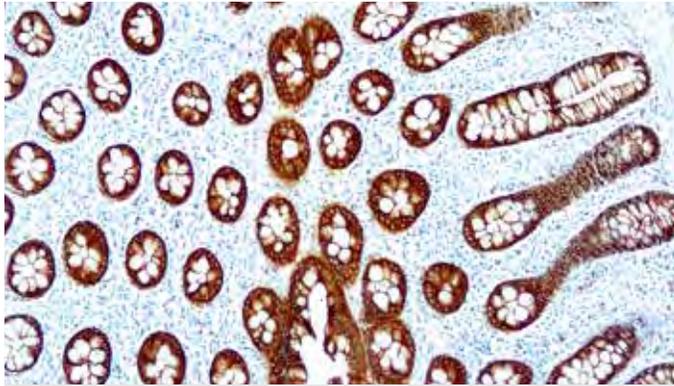
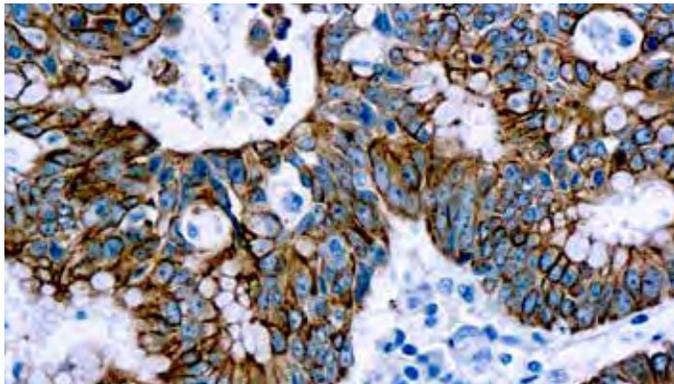
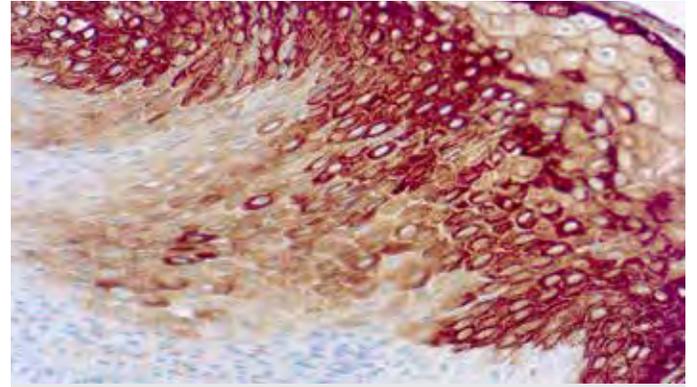
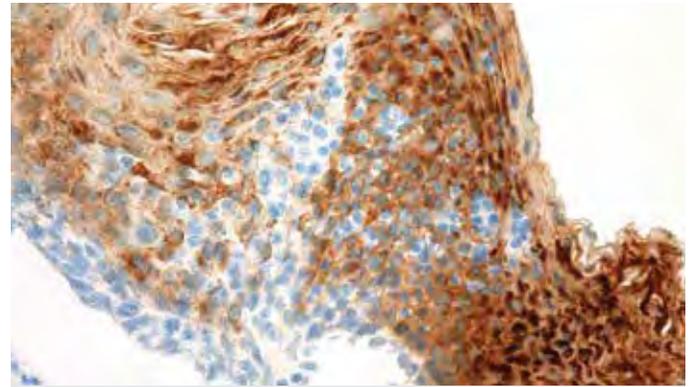
**Immunogen:** BALB/C mice were immunized with ovarian carcinoma cell line, OTN11.

**Isotype:** IgG1, kappa

**Positive Control:** Skin, Lung

**Cellular Localization:** Cytoplasmic

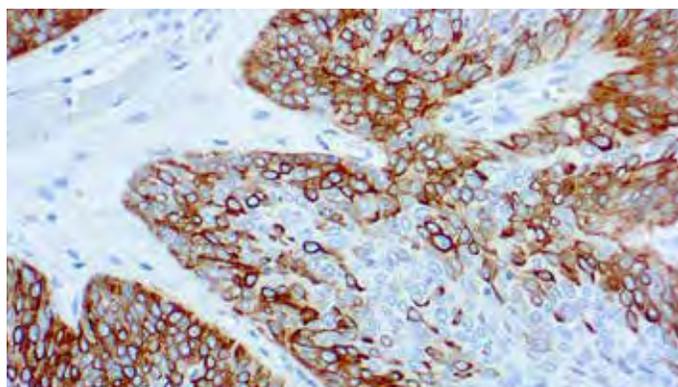
**Specificity:** This antibody recognizes keratin polypeptide of 54 kDa. It stains a number of epithelial cells including ductal and glandular epithelia. Stratified squamous epithelia are positive but transitional epithelium of the urinary tract does not show any staining. This antibody labels adenocarcinomas and transitional cell carcinomas but does not react with squamous cell carcinomas.

**Cytokeratin 8, LMW****Clone:** 35 $\beta$ H11**Catalog No.:** Mob054 Concentrated  
PDM117 Prediluted*Formalin fixed paraffin embedded human colon stained with Cytokeratin 8 antibody (Mob054).***Immunogen:** BALB/C mice were immunized with cytoskeletal extract of human hepatocellular carcinoma cell line, Hep3B.**Isotype:** IgM, kappa**Positive Control:** Skin, Colon**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes keratin polypeptide of 54 kDa. It stains strongly with non-squamous epithelium but does not stain squamous epithelium. It reacts with the sweat gland and ducts in the skin. Adenocarcinomas of the ovary, gastrointestinal tract, ductal carcinoma of breast, pancreas and bile ducts, stain positive with this antibody.**Cytokeratin 8/18****Clone:** 5D3**Catalog No.:** Mob189 Concentrated  
PDM070 Prediluted*Formalin fixed paraffin embedded human colon adenocarcinoma stained with Cytokeratin 8/18 antibody (PDM070).***Immunogen:** Cytokeratins from the human breast carcinoma cell line MCF-7.**Isotype:** IgG1**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to human cytokeratins 8 (52.5 kDa) and 18 (45 kDa). This antibody stains simple and glandular epithelium. This antibody can be useful for the identification of adenocarcinomas and most squamous cell carcinomas.**Cytokeratin 10****Clone:** DE-K10**Catalog No.:** Mob055 Concentrated*Formalin fixed paraffin embedded human skin stained with Cytokeratin 10 antibody (Mob055).***Immunogen:** BALB/C mice were immunized with detergent insoluble extract of human epidermis.**Isotype:** IgG1, kappa**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes keratin polypeptide of 56.5 kDa. It stains suprabasal cells in the epidermis, thymic Hassall's bodies. Simple and glandular epithelia, transitional epithelium and adenocarcinomas are negative with this antibody.**Cytokeratin 13****Clone:** KS-1A3**Catalog No.:** Mob443 Concentrated*Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 13 antibody (Mob443).***Immunogen:** Cultured A431 cells from a human epidermoid carcinoma of the vulva.**Isotype:** IgG1**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to 54 kDa protein. Cytokeratin 13 belongs to the type A (acidic) subfamily of low molecular weight cytokeratins and exists in combination with cytokeratin 4. Cytokeratin 13 is expressed in squamous, non-keratinized epithelium, transitional epithelium and myoepithelium. This antibody is useful for the identification of carcinomas of trachea, sweat glands, bladder, ectocervix, tongue, esophagus, anal canal and the basal layer of keratinized epidermis.

## Cytokeratin 14

Clone: LL002

Catalog No.: Mob186 Concentrated  
PDM138 Prediluted



Formalin fixed paraffin embedded lung squamous cell carcinoma stained with Cytokeratin 14 antibody (Mob186).

**Immunogen:** A synthetic peptide of 15 aa residues from the C-terminus of human keratin 14.

**Isotype:** IgG3

**Positive Control:** Skin, Squamous Cell Carcinoma

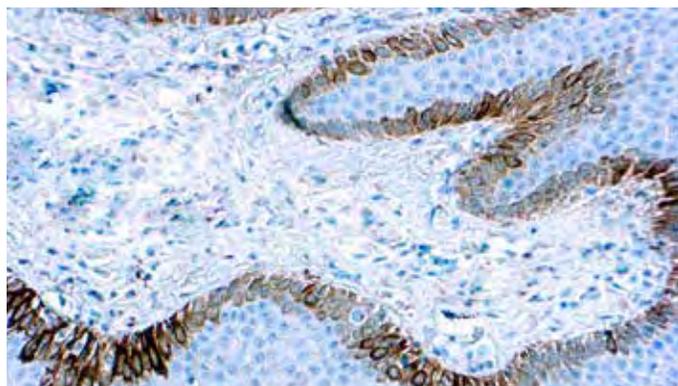
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to 50 kDa cytoke­ratin protein designated cytoke­ratin 14. Cytoke­ratin 14 belongs to the type A (acidic) subfamily of low molecular weight cytoke­ratin­s and exists in combination with cytoke­ratin 15. This antibody can be used to distinguish stratified epithelial cells from simple epithelial cells.

## Cytokeratin 15

Clone: LHK15

Catalog No.: Mob305 Concentrated



Formalin fixed paraffin embedded human skin stained with Cytokeratin 15 antibody (Mob 305).

**Immunogen:** A 17-mer synthetic peptide from the C-terminus of human cytoke­ratin 15.

**Isotype:** IgG2a, kappa

**Positive Control:** Skin

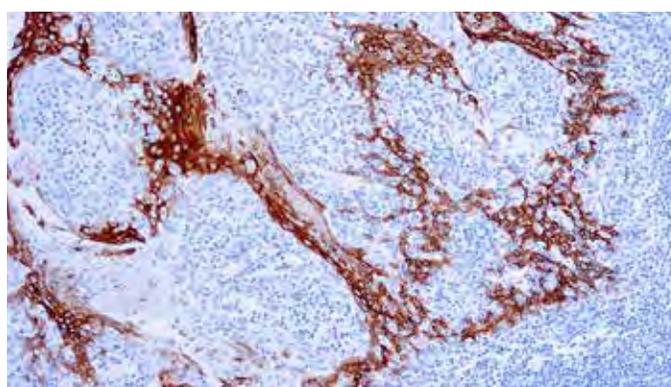
**Cellular Localization:** Cytoplasmic

**Specificity:** Cytoke­ratin 15 is a type I cytoke­ratin without a defined type II partner. Cytoke­ratin 15 is expressed primarily in the basal keratinocytes of stratified tissues, including the fetal epidermis and fetal nail.

## Cytokeratin 16

Clone: LL025

Catalog No.: Mob273 Concentrated  
PDM273 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 16 antibody (Mob273).

**Immunogen:** BALB/C mice were injected with a synthetic peptide from the C-terminus of human cytoke­ratin 16.

**Isotype:** IgG1

**Positive Control:** Skin, Squamous Cell Carcinoma

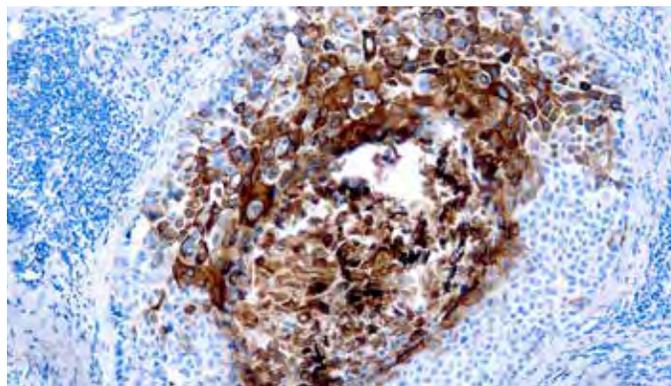
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to a 48 kDa protein, which is identified as cytoke­ratin 16. Cytoke­ratin 16 is expressed in keratinocytes, which are undergoing rapid turnover in the suprabasal region. High concordance was found between the carcinomas immunostaining with the basal cell and the hyperproliferation-related keratins.

## Cytokeratin 17

Clone: E3

Catalog No.: Mob127 Concentrated  
PDM206 Prediluted



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin 17 antibody (Mob127).

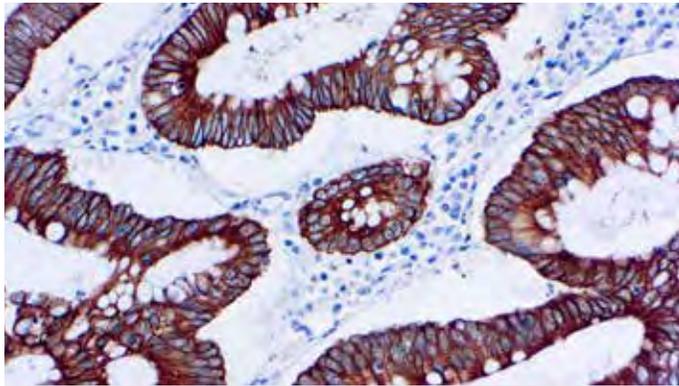
**Immunogen:** Cytoskeletal fraction of rat colon epithelium.

**Isotype:** IgG2b, kappa

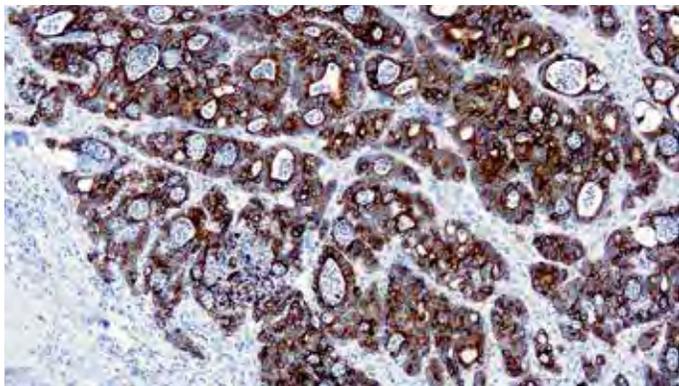
**Positive Control:** Skin

**Cellular Localization:** Cytoplasmic

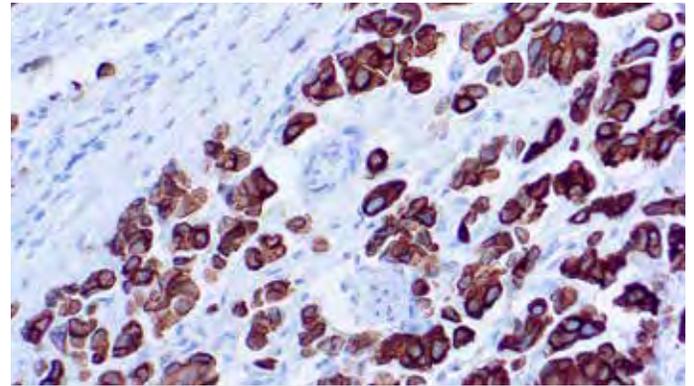
**Specificity:** This antibody is specific to 46 kDa cytoke­ratin protein designated cytoke­ratin 17. It reacts with basal cells in complex epithelia and reacts strongly with squamous cell carcinomas.

**Cytokeratin 18****Clone:** DC10**Catalog No.:** Mob187 Concentrated  
PDM164 Prediluted

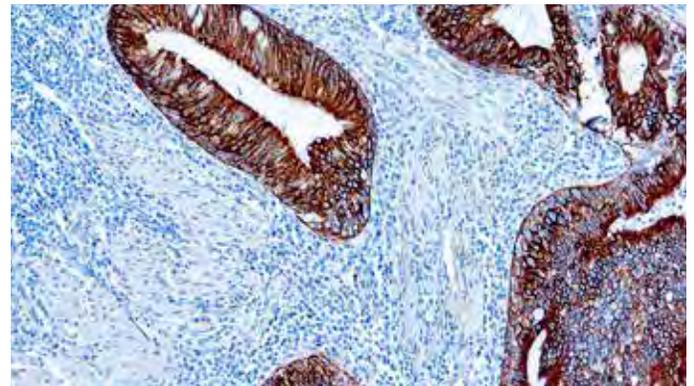
Formalin fixed paraffin embedded human human colon carcinoma stained with Cytokeratin 18 antibody (Mob187).

**Immunogen:** BALB/C mice were injected with PMC-42 human breast carcinoma cell line.**Isotype:** IgG1**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to human cytokeratin 18 of 45 kDa. Cytokeratin 18 belongs to a family of acidic type A keratins and exists along with cytokeratin 8 in most simple ductal and glandular epithelia. This antibody does not react with squamous epithelium. It reacts with benign and malignant epithelial lesions as well as a majority of adenocarcinomas and basal cell carcinomas.**Cytokeratin 19****Clone:** A53-B/A2.26**Catalog No.:** Mob274 Concentrated  
PDM192 Prediluted

Formalin fixed paraffin embedded human human colon carcinoma stained with Cytokeratin 19 antibody (Mob274).

**Immunogen:** BALB/C mice were injected with human breast cancer MCF-7 cells.**Isotype:** IgG2a, kappa**Positive Control:** Skin, Tonsil**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to a 40 kDa protein, cytokeratin 19. Its epitope maps between amino acids 312-335. This antibody reacts with MCF-7 cells, which are known to contain cytokeratin 19.**Cytokeratin 20****Clone:** KS 20.8**Catalog No.:** Mob123 Concentrated  
PDM049 Prediluted

Formalin fixed paraffin embedded human colon carcinoma stained with Cytokeratin 20 antibody (PDM049).

**Immunogen:** Cytokeratins isolated from human micro-dissected villi of human duodenal mucosa.**Isotype:** IgG2a, kappa**Positive Control:** Skin, Colon Carcinoma**Cellular Localization:** Cytoplasmic**Specificity:** Cytokeratin 20 is less acidic than the other type I cytokeratins and is of particular interest because of its restricted range of expression. This antibody reacts with cytokeratin polypeptide of 46 kDa in immunoblot analyses. Studies have shown that a marked difference exists in the expression of Cytokeratin 20 among various carcinomas.**Cytokeratin, Acidic (AE1)****Clone:** AE1**Catalog No.:** Mob092 Concentrated  
PDM043 Prediluted

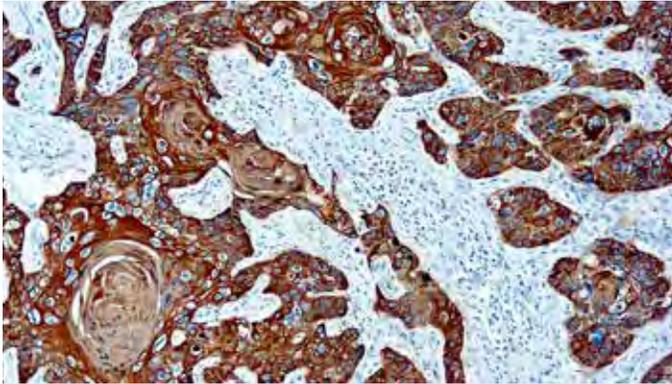
Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE1 antibody (Mob092).

**Immunogen:** BALB/C mice were immunized with human epidermal keratin.**Isotype:** IgG1, kappa**Positive Control:** Skin**Cellular Localization:** Cytoplasm**Specificity:** This antibody recognizes most of the acidic (Type I) keratins. It recognizes keratin polypeptides of 50 and 56.5 kDa. In keratinized epidermis, 50 kDa keratin is present in the basal layer, while 56.5 kDa keratin is present in suprabasal layers. This antibody can be used to stain distinct cell layers in an epithelial tissue and various neoplasms of epithelial origin.

## Cytokeratin, Basic (AE3)

Clone: AE3

Catalog No.: Mob093 Concentrated  
PDM044 Prediluted



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE3 antibody (Mob093).

**Immunogen:** BALB/C mice were immunized with human epidermal keratin.

**Isotype:** IgG1, kappa

**Positive Control:** Skin

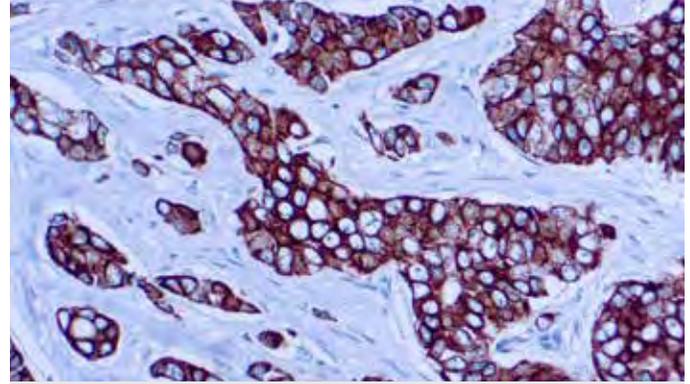
**Cellular Localization:** Cytoplasm

**Specificity:** This antibody recognizes most of the basic (Type II) keratins. It recognizes keratin polypeptides of 58 and 65 to 67 kDa. In keratinized epidermis, 58 kDa keratin is present in the basal and suprabasal layers, while 65 to 67 kDa keratin is present in the cells above the basal layers. This antibody can be used to stain different cell layers in an epithelial tissue and various neoplasms of epithelial origin.

## Cytokeratin (CAM 5.2)

Clone: CAM 5.2

Catalog No.: Mob469 Concentrated  
PDM181 Prediluted



Formalin fixed paraffin embedded human breast tissue stained with Cam 5.2 (Mob469).

**Immunogen:** Anti-Cytokeratin, clone CAM 5.2, is derived from hybridization of mouse P3/NS-1/1-Ag4-1myeloma cells with spleen cells from BALB/c mice immunized with the human colorectal carcinoma cell line HT29.

**Isotype:** IgG2a

**Positive Control:** Lung, colon, prostate and breast tissue.

**Cellular Localization:** Cytoplasmic.

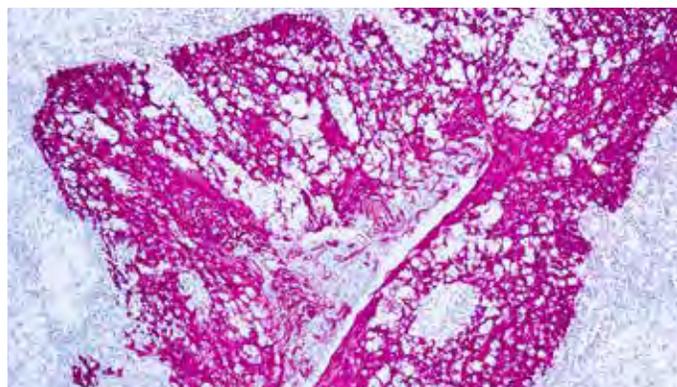
**Specificity:** Anti-Cytokeratin (CAM 5.2) reagent has a primary reactivity with human keratin proteins that correspond to Moll's peptides #7 and #8, Mr 48 and 52 kDa (kd), respectively. Cytokeratin 7 and 8 are present on secretory epithelia of normal human tissue but not on stratified squamous epithelium. Anti-Cytokeratin (CAM 5.2) stains most epithelial-derived tissue, including: liver, renal tubular epithelium, hepatocellular and renal cell carcinomas. Anti-Cytokeratin (CAM 5.2) might not react with some squamous cell carcinomas.

## Diagnostic BioSystems

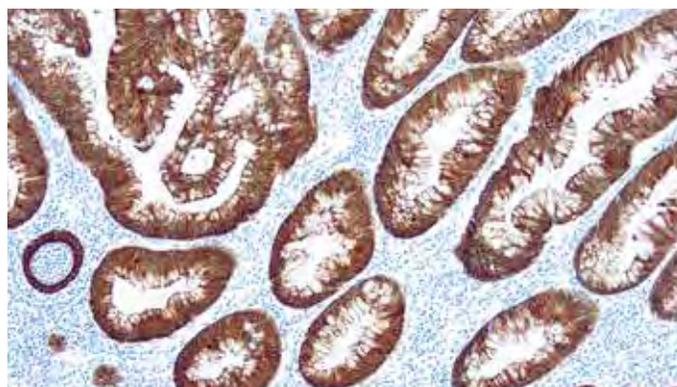
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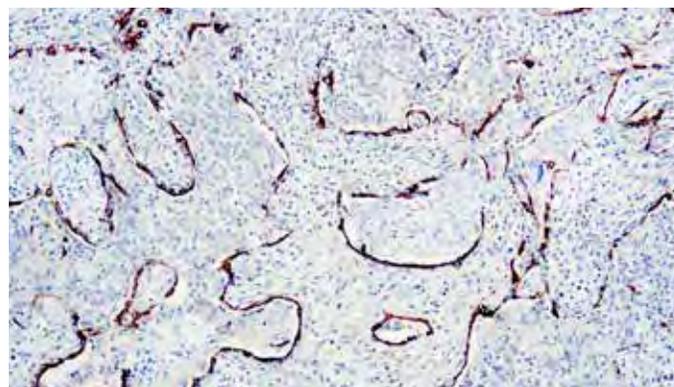


**Cytokeratin, HMW (34 $\beta$ E12)****Clone:** 34 $\beta$ E12**Catalog No.:** Mob059 Concentrated  
PDM074 Prediluted

Formalin fixed paraffin embedded human tonsil stained with Cytokeratin HMW antibody (PDM074).

**Immunogen:** BALB/C mice were immunized with solubilized keratin extract from human stratum corneum.**Isotype:** IgG1, kappa**Positive Control:** Skin, Prostate**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes keratin polypeptides of 68, 58, 56.5 and 50 kDa in the stratum corneum. The antibody reacts with squamous, ductal and other complex epithelia. It stains adenocarcinomas, breast, pancreas, bile duct, salivary gland and transitional cell carcinomas.**Cytokeratin, Pan****Catalog No.:** RP167 Concentrated  
PDR167 Prediluted

Formalin fixed paraffin embedded human colon adenocarcinoma stained with Cytokeratin, Pan antibody (RP167).

**Immunogen:** Recombinant Full-length human KRT76 and KRT77 proteins.**Positive Control:** Colon adenocarcinoma**Cellular Localization:** Cytoplasmic**Specificity:** Many studies have shown the usefulness of keratins as markers in cancer research and tumor diagnosis. It is a broad spectrum anti pan-cytokeratin antibody, which differentiates epithelial tumors from non-epithelial tumors e.g. squamous vs. adenocarcinoma of the lung, liver carcinoma, breast cancer, and esophageal cancer. It may be useful to characterize the source of various neoplasms and to study the distribution of cytokeratin containing cells in epithelia during normal development and during the development of epithelial neoplasms. This antibody stains cytokeratins present in normal and abnormal human tissues and has high sensitivity in the recognition of epithelial cells and carcinomas.**Cytokeratin, Pan (AE1/AE3)****Clone:** AE1/AE3**Catalog No.:** Mob190 Concentrated  
PDM072 Prediluted

Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with Cytokeratin AE1/AE3 (PDM072).

**Immunogen:** BALB/C mice were immunized with human epidermal keratin.**Isotype:** AE1, IgG1, kappa; AE3, IgG1, kappa**Positive Control:** Skin, Tonsil**Cellular Localization:** Cytoplasmic**Specificity:** This AE1/AE3 antibody cocktail recognizes most of the acidic (Type I) keratins as well as basic (Type II). It recognizes keratin polypeptides of 40, 48, 50, 52, 54, 56.5, 58, 59 and 64 to 67 kDa. In keratinized epidermis, 50 kDa keratin is present in the basal layer, while 56.5 kDa keratin is present in suprabasal layers. 58 kDa keratin is present in the basal and suprabasal layers, while 65 to 67 kDa keratin is present in the cells above the basal layers. This antibody can be used to stain distinct cell layers in an epithelial tissue and various neoplasms of epithelial origin.**Cytokeratin, Wide Spectrum****Catalog No.:** RP010 Concentrated  
PDR035 Prediluted

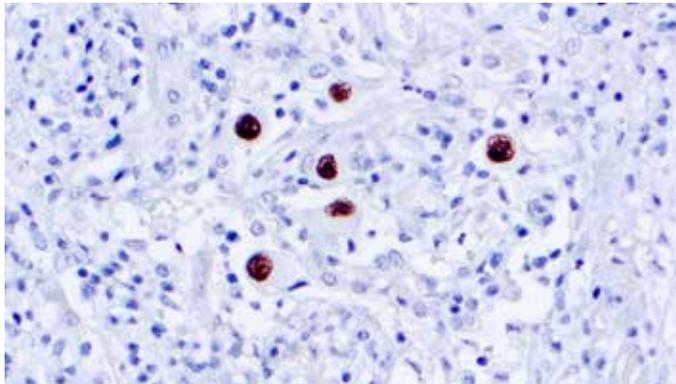
Formalin fixed paraffin embedded human skin stained with Cytokeratin Wide Spectrum antibody (PDR035).

**Immunogen:** Cytokeratin isolated from bovine muzzle epidermis.**Positive Control:** Skin**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with cytokeratins of 58, 56, 52, 60, 51, 48 and 68 kDa MW. This antibody is well suited for the staining of a broad spectrum of human keratins.

## Cytomegalovirus (CMV Cocktail)

Clone: DDG9 + CCH2

Catalog No.: Mob049R Concentrated  
PDM075R Prediluted



Formalin fixed paraffin embedded human infected tissue stained with CMV antibody (Mob049R).

**Immunogen:** BALB/C mice were immunized with cytomegalovirus infected cell lysate.

**Isotype:** DDG9, IgG2a, kappa; CCH2, IgG1, kappa

**Positive Control:** Infected lung

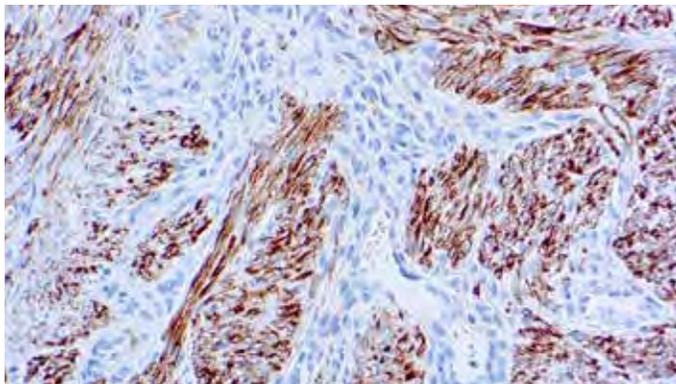
**Cellular Localization:** Nuclear

**Specificity:** This cocktail antibody stains infected cells giving a nuclear staining pattern with an immediate early and an early CMV antigen.

## Desmin

Clone: D33

Catalog No.: Mob060 Concentrated  
PDM006 Prediluted



Formalin fixed paraffin embedded human uterus stained with Desmin antibody (PDM006).

**Immunogen:** BALB/C mice were immunized with purified desmin from human muscle.

**Isotype:** IgG1, kappa

**Positive Control:** Leiomyoma

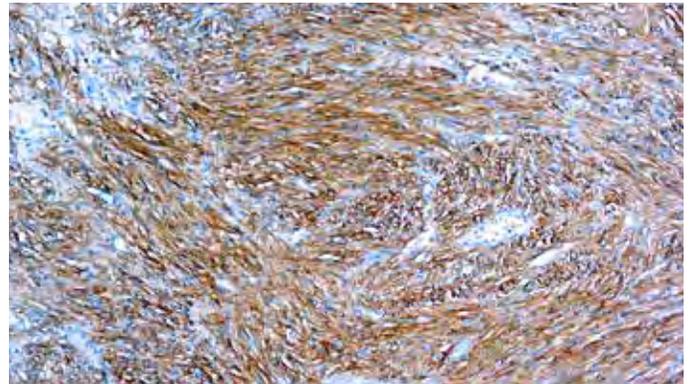
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with desmin protein of 53 kDa. Both striated as well as smooth muscle cells stain well with this antibody.

## DOG 1

Clone: DOG1.1

Catalog No.: Mob466 Concentrated  
PDM170 Prediluted



Formalin fixed paraffin embedded gastrointestinal stromal tumor stained with DOG1 antibody (Mob466).

**Immunogen:** A synthetic peptide of human DOG1 protein.

**Isotype:** IgG

**Positive Control:** Gastrointestinal stromal tumor tissue

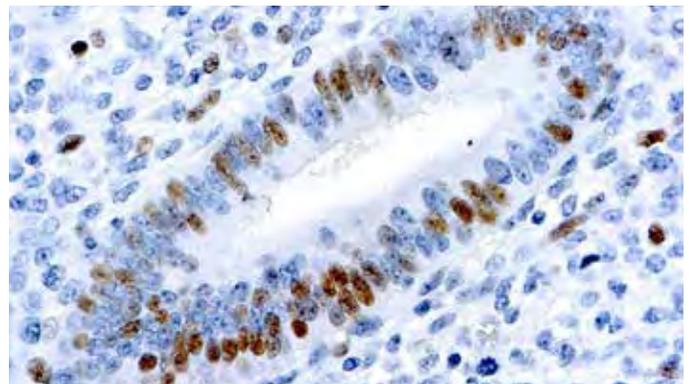
**Cellular Localization:** Cytoplasmic and membrane

**Specificity:** DOG1 is expressed ubiquitously in gastrointestinal stromal tumors irrespective of c-Kit or PDGFR alpha mutation status. Reactivity for DOG1 may aid in the diagnosis of gastrointestinal stromal tumors, including PDGFRA mutants that fail to express c-Kit antigen, and lead to appropriate treatment with imatinib mesylate, an inhibitor of the c-Kit tyrosine kinase.

## E2F-1 Transcription Factor

Clone: KH95

Catalog No.: Mob381 Concentrated



Formalin fixed paraffin embedded human uterus stained with E2F-1 Transcription Factor antibody (Mob381).

**Immunogen:** BALB/C mice were immunized with a recombinant human E2F-1 protein.

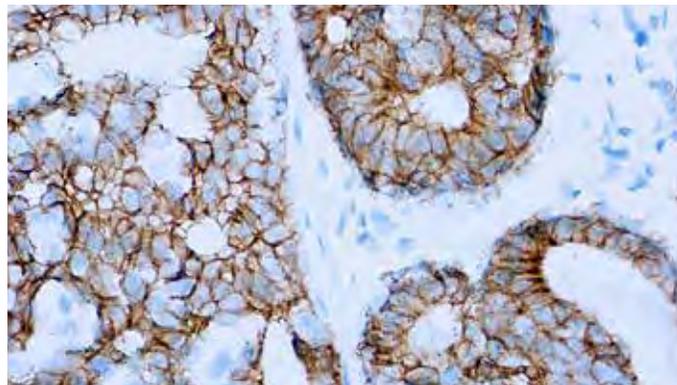
**Isotype:** IgG2a

**Positive Control:** Tonsil, breast carcinoma

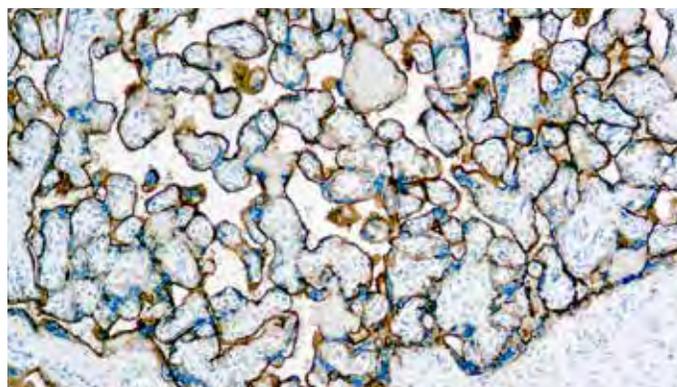
**Cellular Localization:** Nuclear

**Specificity:** This antibody reacts with a protein of 60 kDa. E2Fs are DNA-binding proteins, which associate with negative regulators, such as the retinoblastoma p107 protein, resulting in an altered rate of gene transcription. E2F-1 is proposed to be involved in several cellular processes that range from tumor suppression, cell progression and oncogenesis. E2F-1 over expression can also drive cells into apoptosis.

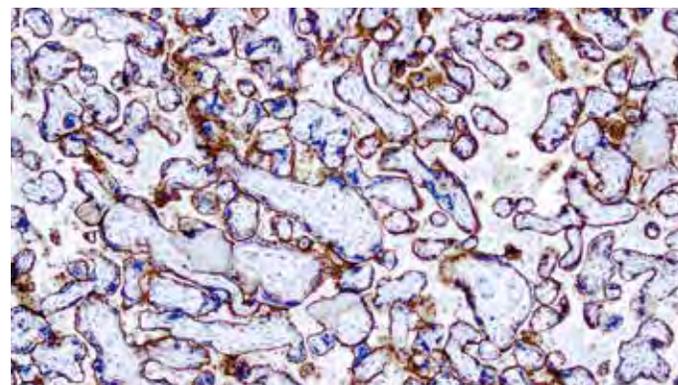
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**E-Cadherin****Clone:** SPM471**Catalog No.:** Mob550 Concentrated  
PDM182 Prediluted

Formalin fixed paraffin embedded human breast carcinoma stained with E-Cadherin antibody (Mob550).

**Immunogen:** Recombinant protein encoding human Cadherin-E 600-707aa**Isotype:** IgG 2b/k**Positive Control:** Breast carcinoma, Colon carcinoma, Appendix**Cellular Localization:** Cell Membrane**Specificity:** E-cadherin (uvomorulin, cell-CAM120/80) is a calcium dependent cell adhesion molecule expressed predominately in epithelial tissues. It plays an important role in the growth and development of cells via the mechanisms of control of tissue architecture and the maintenance of tissue integrity. Numerous studies have demonstrated that reduction and/or loss of E-cadherin expression in carcinomas correlates positively with the potential of these tumors for invasion and metastasis.**EGFR (Epidermal Growth Factor Receptor)****Clone:** 111.6**Catalog No.:** Mob267 Concentrated  
PDM132 Prediluted

Formalin fixed paraffin embedded human placenta stained with EGFR antibody (Mob267).

**Immunogen:** BALB/C mice were injected with extracellular domain of human recombinant EGFR protein.**Isotype:** IgG1**Positive Control:** Placenta**Cellular Localization:** Cell membrane**Specificity:** This antibody is specific to a 170 kDa protein. EGF-Receptor is a member of the type I family of growth factor receptors. The antibody recognizes an epitope mapping in the extracellular domain of EGFR. Overexpression of EGFR has been reported in tumors of breast, brain, bladder, lung, stomach, head and neck, esophagus, cervix, vulva, ovary and endometrium. EGFR is over expressed in squamous cell carcinoma.*IVD only for markets outside the U.S. RUO for U.S. market.***EGFR (Epidermal Growth Factor Receptor)****Clone:** 31G7**Catalog No.:** Mob461 Concentrated  
PDM226 Prediluted

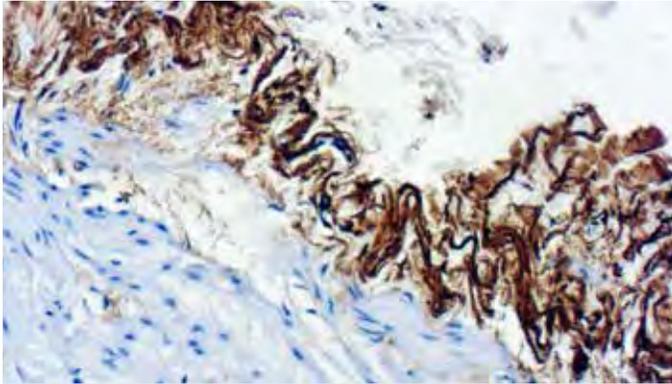
Formalin fixed paraffin embedded human placenta stained with EGFR antibody (Mob461).

**Immunogen:** Human EGFR derived from A-431 cell line.**Isotype:** IgG1**Positive Control:** Breast carcinoma, Placenta**Cellular Localization:** Membrane, cytoplasm**Specificity:** The epidermal growth factor receptor (EGFR) is a 170 kDa transmembrane protein consisting of an extracellular EGF-binding domain, a short transmembrane region and an intracellular domain with ligand-activated tyrosine kinase activity. EGFR is expressed in many normal epithelial tissues, particularly in the basal layers of stratified epithelium and in squamous epithelium. Over expression of EGFR has been observed in many types of neoplasia, as a result of gene amplification and/or increased protein transcription.*IVD only for markets outside the U.S. RUO for U.S. market.***Fully Automated**  
**High Quality**  
**Efficient**  
**Reliable**

## Elastin

**Clone:** BA4

**Catalog No.:** Mob230 Concentrated  
PDM300 Prediluted



Formalin fixed paraffin embedded human renal cell carcinoma stained with Elastin antibody (Mob230).

**Immunogen:** Bovine  $\alpha$ -elastin.

**Isotype:** IgG1

**Positive Control:** Heart, Kidney

**Cellular Localization:** Connective tissue

**Specificity:** This antibody recognizes insoluble elastin,  $\alpha$ -elastin, soluble non-cross linked precursor of elastin (tropoelastin). Elastin is an important polymeric protein of connective tissue that imparts elasticity to vertebrate elastic tissues.

## Epithelial Antigen

**Clone:** VU-1D9

**Catalog No.:** Mob062 Concentrated  
PDM077 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen (Mob062).

**Immunogen:** BALB/C mice were immunized with small cell lung carcinoma.

**Isotype:** IgG1, kappa

**Positive Control:** Breast carcinoma

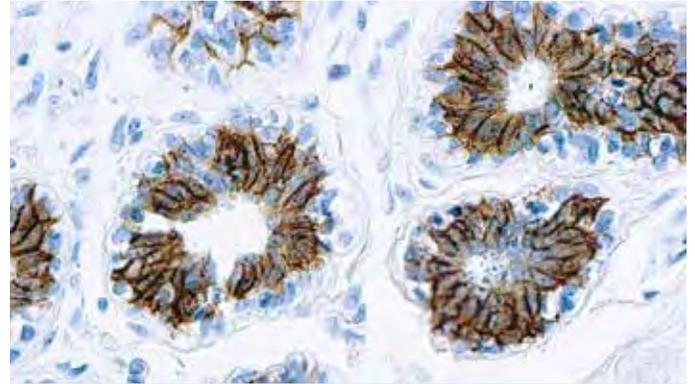
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with two glycoproteins of 34 and 49 kDa present on the epithelial cells. It stains with simple epithelia and basal layers of stratified non-keratinized squamous epithelium.

## Epithelial Antigen

**Clone:** Ber-EP4

**Catalog No.:** Mob406 Concentrated  
PDM131 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen (PDM131).

**Immunogen:** BALB/C mice were immunized with human breast carcinoma cell line, MCF-7.

**Isotype:** IgG1, kappa

**Positive Control:** Kidney, Breast carcinoma

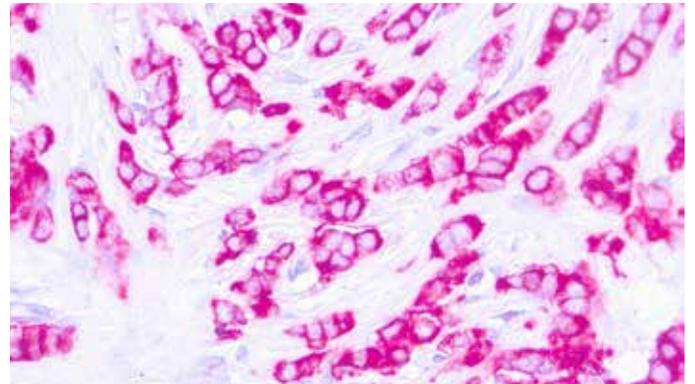
**Cellular Localization:** Cell membrane

**Specificity:** Epithelial antigen is a cell surface glycoprotein and is broadly distributed in epithelial cells and displays a highly conserved expression in carcinomas. Epithelial antigen has been shown to play an important role as a tumor cell marker in lymph nodes from patients with esophageal carcinoma. Epithelial antigen can be used to distinguish between basal cell and basosquamous carcinomas and squamous cell carcinoma of the skin.

## Epithelial Membrane Antigen (EMA)

**Clone:** E29

**Catalog No.:** Mob401 Concentrated  
PDM204 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Epithelial Antigen (Mob401).

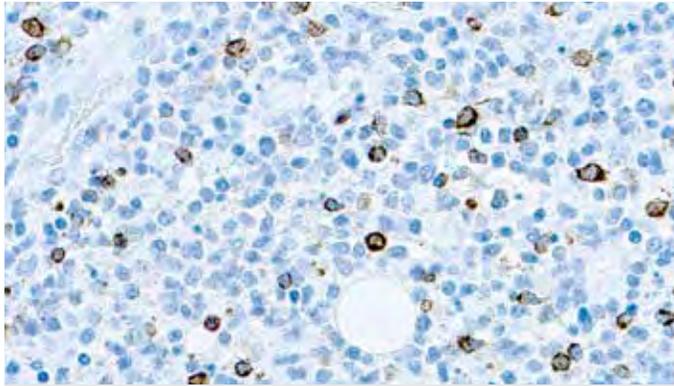
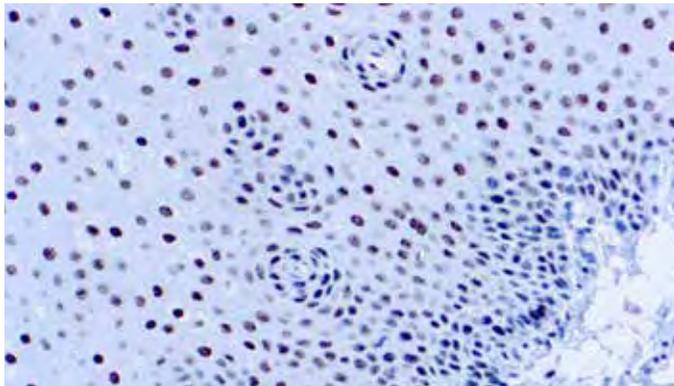
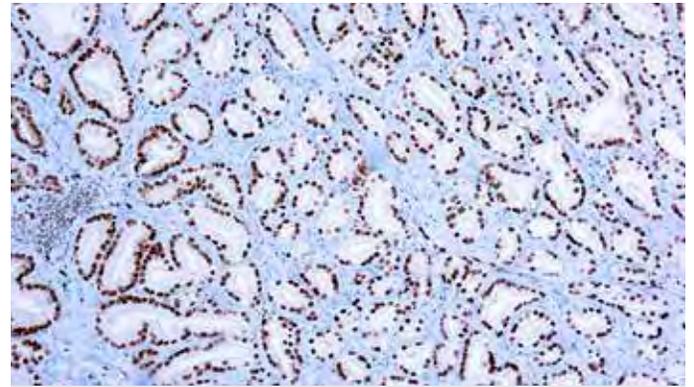
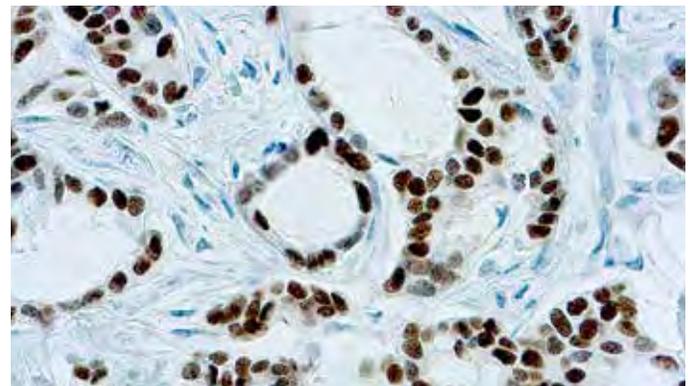
**Immunogen:** BALB/C mice were immunized with delipidated human milk fat globule membrane preparation.

**Isotype:** IgG2a, kappa

**Positive Control:** Breast carcinoma

**Cellular Localization:** Cell membrane and cytoplasmic

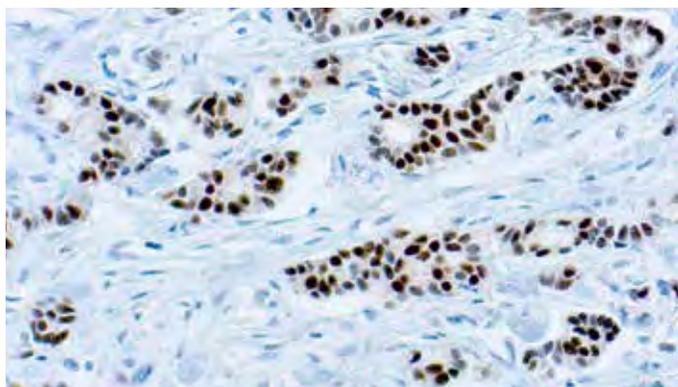
**Specificity:** This antibody reacts with an antigen of 265-400 kDa belonging to a heterogeneous group of heavily glycosylated proteins called human milk fat globule proteins. It stains both normal and neoplastic cells. Among normal epithelia, it reacts strongly with mammary epithelium and glandular epithelia but shows a patchy staining with squamous epithelium.

**Epstein-Barr Virus (EBV)****Clone:** CS1, CS2, CS3, CS4**Catalog No.:** Mob194 Concentrated  
PDM128 Prediluted*Formalin fixed paraffin embedded human infected tissue stained with EBV (Mob194).***Immunogen:** Recombinant fusion protein containing sequences of bacterial  $\beta$ -galactosidase and EBV encoded latent membrane protein.**Isotype:** IgG1**Positive Control:** Infected lymphoblastoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to 60 kDa latent membrane protein (LMP-1) encoded by the BNLF1 gene of the EBV. Each clone reacts with different epitopes on the hydrophilic C-terminus of the cytoplasmic domain of LMP-1. This antibody stains strongly with EBV positive lymphoblastoid cell lines and EBV infected B cell immunoblasts in infectious mononucleosis.  
*IVD only for markets outside the U.S. RUO for U.S. market.***ERCC1****Clone:** 8F1**Catalog No.:** Mob336 Concentrated  
PDM151 Prediluted*Formalin fixed paraffin embedded human tonsil stained with ERCC1 antibody (Mob336).***Immunogen:** BALB/C mice were injected with full length recombinant human ERCC1 protein.**Isotype:** IgG2b**Positive Control:** Tonsil**Cellular Localization:** Nuclear**Specificity:** This antibody reacts with a 33-36 kDa protein known as ERCC1 (excision repair cross complementing) polypeptide. ERCC1 is required for nucleotide excision repair of damaged DNA and is homologous to RAD10. In mammalian cells, XPG cleaves 3' of the DNA lesion while ERCC1-XPF complex makes the 5' incision.**ERG****Clone:** EP111**Catalog No.:** RMPD034 Prediluted*Formalin fixed paraffin embedded human prostate carcinoma stained with ERG antibody (RMPD034).***Immunogen:** A synthetic peptide corresponding to residues on the C-terminus of the human ERG protein.**Isotype:** Rabbit IgG**Positive Control:** Prostate carcinoma**Cellular Localization:** Nuclear**Specificity:** ERG, the ETS related gene, belongs to the ETS family that plays important roles in cell development, differentiation, proliferation, apoptosis and tissue remodeling. The ERG antibody identifies endothelial cells, lymphocytes and prostate cancer cells.**Estrogen Receptor (ER)****Clone:** SP1**Catalog No.:** RMAB001 Concentrated  
RMPD001 Prediluted*Formalin fixed paraffin embedded human breast carcinoma stained with Estrogen Receptor antibody (RMPD001).***Immunogen:** Synthetic peptide derived from C-terminal of human estrogen receptor.**Isotype:** IgG**Positive Control:** Breast Carcinoma**Cellular Localization:** Nuclear**Specificity:** This antibody recognizes a protein of 67kDa, which is identified as estrogen receptor (ER). ER content of breast cancer tissue is an important parameter in the prediction of prognosis and response to endocrine therapy. This antibody strongly stains the nucleus of epithelial cells in breast carcinomas. The ER is an important regulator of growth and differentiation in the mammary gland. Presence of ER in breast tumors indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy.*IVD only for markets outside the U.S. RUO for U.S. market.*

## Estrogen Receptor (ER)

Clone: 6F11

Catalog No.: Mob121 Concentrated  
PDM048 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with Estrogen Receptor antibody (Mob121).

**Immunogen:** Prokaryotic recombinant protein corresponding to the full-length estrogen receptor molecule.

**Isotype:** IgG1

**Positive Control:** Breast carcinoma

**Cellular Localization:** Nuclear

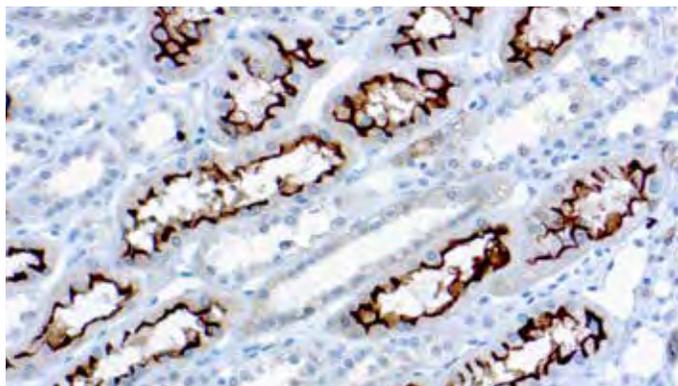
**Specificity:** This antibody is specific to estrogen receptor, which is associated with superior prognosis and a better response to anti-estrogen therapy. The nuclei of the estrogen receptor positive cells stain very strongly with this antibody, without any staining in the cytoplasm.

IVD only for markets outside the U.S. RUO for U.S. market.

## Ezrin/p81/Cytovillin

Clone: 3C12

Catalog No.: Mob380 Concentrated



Formalin fixed paraffin embedded renal cell carcinoma stained with Ezrin antibody (Mob380).

**Immunogen:** BALB/C mice were immunized with a recombinant fragment of human ezrin corresponding to amino acid 362-585.

**Isotype:** IgG1

**Positive Control:** Lung

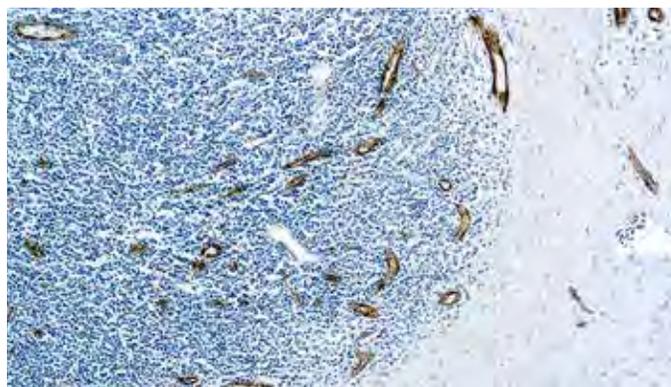
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with a protein of 81 kDa. Ezrin serves as a tyrosine kinase substrate and is phosphorylated in EGF-stimulated cells. Ezrin is a cytoplasmic protein, enriched in microvilli and other cell surfaces. Ezrin has an actin-binding capacity. Ezrin is expressed in epithelial cells but not in mesenchymal cells. Ezrin is also expressed by certain epithelial tumors, such as renal cell adenocarcinomas.

## Factor VIII (Von Willebrand Factor)

Clone: F8/86

Catalog No.: Mob196 Concentrated  
PDM019 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Factor VIII antibody (Mob196).

**Immunogen:** Von Willebrand factor isolated from human plasma.

**Isotype:** IgG1, kappa

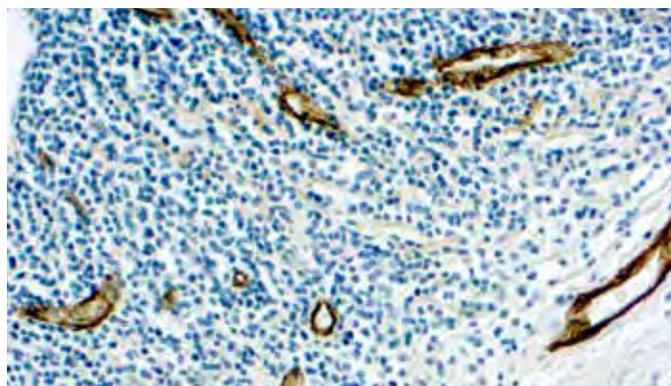
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with Von Willebrand factor in endothelial cells. It also reacts with megakaryocytes in human bone marrow.

## Factor VIII (Von Willebrand Factor)

Catalog No.: RP012 Concentrated  
PDR014 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Factor VIII antibody (RP012).

**Immunogen:** Factor VIII related antigen isolated from human plasma.

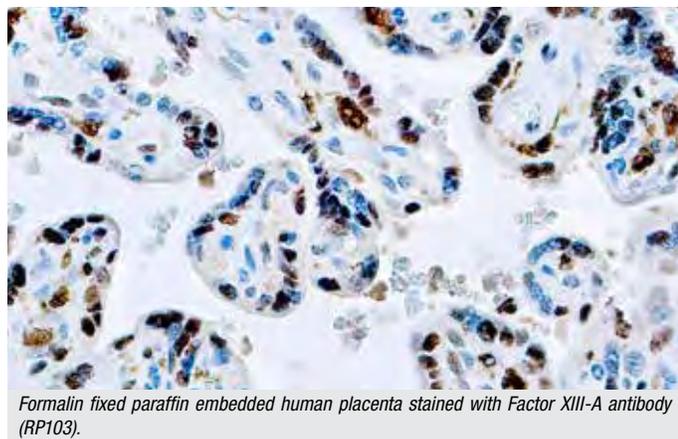
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human factor VIII related antigen. It stains endothelial cells and megakaryocytes in various human tissues. This antibody does not cross-react with any other cell types.

**Factor XIII-A**

**Catalog No.:** RP103 Concentrated  
PDR054 Prediluted



Formalin fixed paraffin embedded human placenta stained with Factor XIII-A antibody (RP103).

**Immunogen:** Recombinant protein corresponding to A-subunit of coagulation Factor XIII a.

**Positive Control:** Placenta

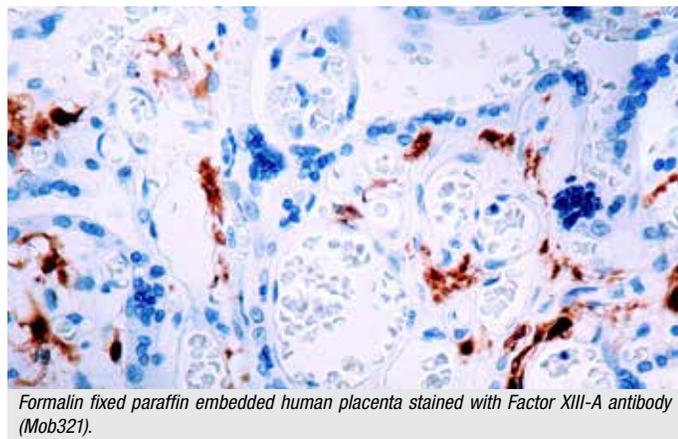
**Cellular Localization:** Cytoplasmic, nuclear

**Specificity:** This antibody reacts with a 160 kDa (unreacted dimer) and 80 kDa (reduced monomer) protein. Factor XIII is a  $\beta$ -globulin found in plasma and is composed of two subunits, Factor XIII-A and Factor XIII-B. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160 kDa. Factor XIII is a dermal dendrocyte marker and shows variable reaction with these types of tumors. Factor XIII can be used for histiocytic phenotyping and has been reported to mark capillary hemangiomas and tumors of the central nervous system.

**Factor XIII-A**

**Clone:** AC-1A1

**Catalog No.:** Mob321 Concentrated  
PDM141 Prediluted



Formalin fixed paraffin embedded human placenta stained with Factor XIII-A antibody (Mob321).

**Immunogen:** BALB/C mice were injected with recombinant human protein corresponding to A-subunit of coagulation Factor XIII.

**Isotype:** IgG1, kappa

**Positive Control:** Placenta

**Cellular Localization:** Cytoplasmic, nuclear

**Specificity:** This antibody is specific to 160 kDa protein known as Factor XIII-A. Factor XIII is a  $\beta$ -globulin found in plasma and is composed of two subunits, Factor XIII-A and Factor XIII-B. Factor XIII-A is the catalytic subunit and is a dimer of M.W. 160 kDa. Factor XIII is a dermal dendrocyte marker and v variable reaction with these types of tumors.

**Fascin-1**

**Clone:** 55k-2

**Catalog No.:** Mob560 Concentrated  
PDM560 Prediluted



Formalin fixed paraffin embedded human Hodgkin's lymphoma stained with Fascin-1 antibody (Mob560).

**Immunogen:** Human fascin-1

**Isotype:** IgG1, kappa

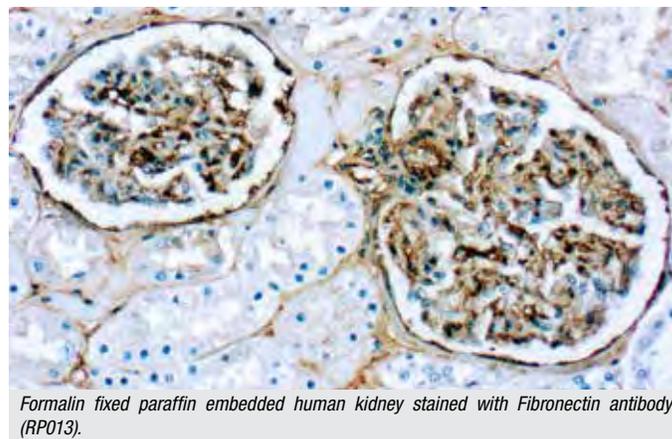
**Positive Control:** Hodgkin's lymphoma, ovary

**Cellular Localization:** Cytoplasmic

**Specificity:** This marker may be helpful to distinguish between Hodgkin lymphoma and non-Hodgkin lymphoma in difficult cases. Also, the lack of expression of fascin-1 in the neoplastic follicles in follicular lymphoma may be helpful in distinguishing these lymphomas from reactive follicular hyperplasia in which the number of follicular dendritic cells is normal or increased. Antibody to fascin-1 has been suggested as a prognostic marker in neuroendocrine neoplasms of the lung as well as in ovarian cancer. Fascin-1 expression may be induced by Epstein-Barr virus (EBV) infection of B cells with the possibility that viral induction of fascin in lymphoid or other cell types must also be considered in EBV-positive cases.

**Fibronectin**

**Catalog No.:** RP013 Concentrated  
PDR170 Prediluted



Formalin fixed paraffin embedded human kidney stained with Fibronectin antibody (RP013).

**Immunogen:** Fibronectin isolated from a pool of normal human plasma.

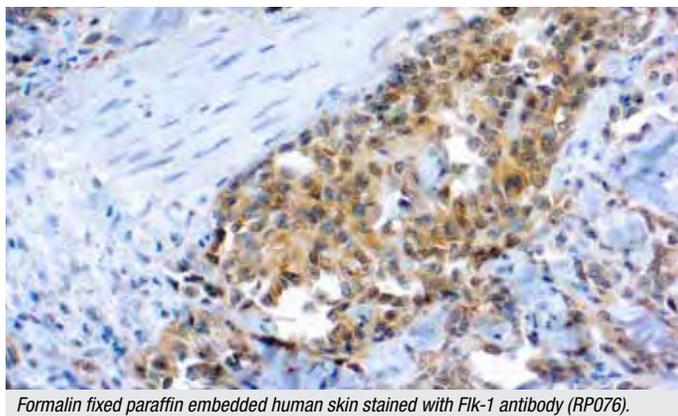
**Positive Control:** Kidney

**Cellular Localization:** Basement membrane, connective tissue

**Specificity:** This antibody reacts with human fibronectin in liver, tonsil, skin and kidney. Traces of contaminating antibodies have been removed by solid-phase adsorption. Only the fibronectin arch was observed in crossed immunoelectrophoresis.

## Flk-1/KDR/VEGFR2

Catalog No.: **RP076 Concentrated**  
**PDR171 Prediluted**



Formalin fixed paraffin embedded human skin stained with Flk-1 antibody (RP076).

**Immunogen:** A synthetic peptide derived from the C-terminus of the precursor form of the mouse Flk-1.

**Positive Control:** Angiosarcoma

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 180 kDa protein, known as Flk-1, KDR or vascular endothelial growth factor receptor 2 (VEGFR2). Flk-1 is a cell membrane receptor kinase. Flk-1 is a high affinity receptor for vascular endothelial growth factor and is putatively involved in the growth of endothelial cells and angiogenesis.

## Flt-1/VEGFR1

Catalog No.: **RP077 Concentrated**



Formalin fixed paraffin embedded human bladder carcinoma stained with Flt-1 antibody (RP077).

**Immunogen:** A synthetic peptide derived from the C-terminus of the Flt-1 precursor of human origin.

**Positive Control:** Angiosarcoma

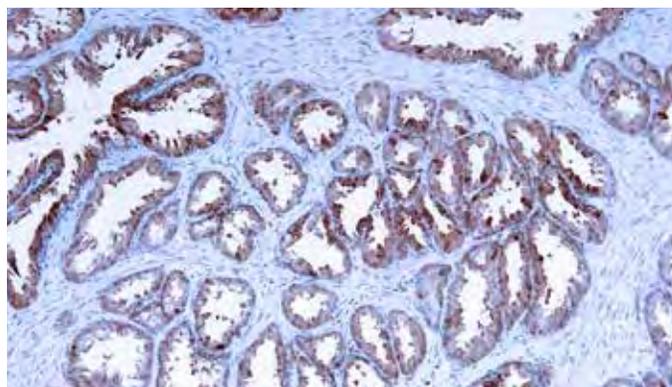
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 180 kDa protein, known as Flt-1 or vascular endothelial growth factor receptor 1 (VEGFR1). Flt-1 is a cell membrane receptor kinase. Flk-1 has a high affinity receptor for vascular endothelial growth factor and is putatively involved in the growth of endothelial cells and angiogenesis.

## Galectin-3

Clone: **H-5**

Catalog No.: **Mob541 Concentrated**  
**PDM541 Prediluted**



Formalin fixed paraffin embedded human prostate carcinoma stained with Galectin-3 (Mob541).

**Immunogen:** Raised against a synthetic sequence of amino acids 2-31 of human origin

**Isotype:** IgG1

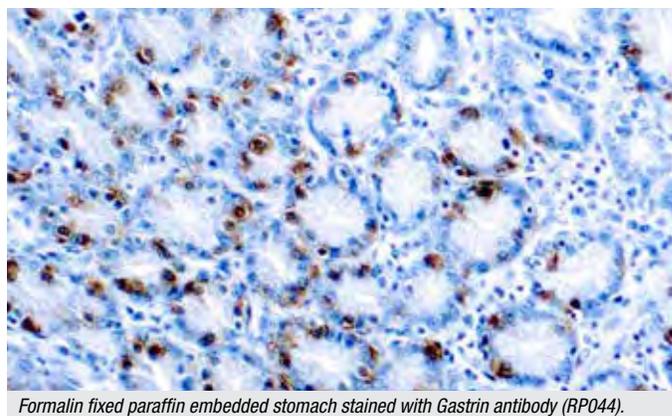
**Positive Control:** Colon carcinoma, papillary thyroid carcinoma

**Cellular Localization:** Cytoplasmic and Nuclear

**Specificity:** Galectin-3 is expressed in colonic and intestinal epithelium, inflammatory macrophages, papillary and follicular carcinomas, neoplastic astrocytes and some B and T lymphocytes. Upregulated expression of galectin-3 is involved in cancer progression and metastasis. Galectin-3 mediates the endocytosis of  $\beta$ 1 Integrins in a lactose-dependent manner and is associated with thyroid malignancy and Crohn's disease. It may also be used as a marker for diagnosing cases involving Hurthle cell adenomas and carcinomas.

## Gastrin

Catalog No.: **RP044 Concentrated**  
**PDR027 Prediluted**



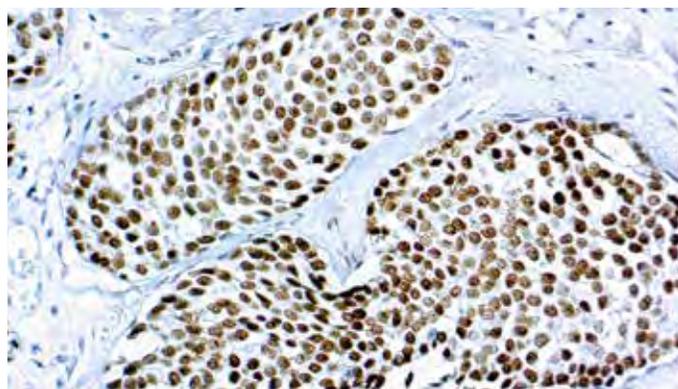
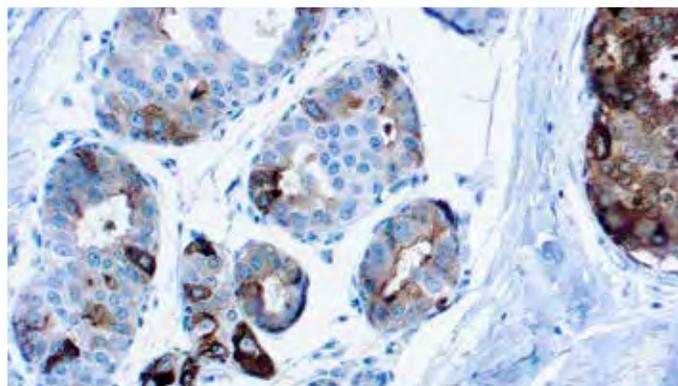
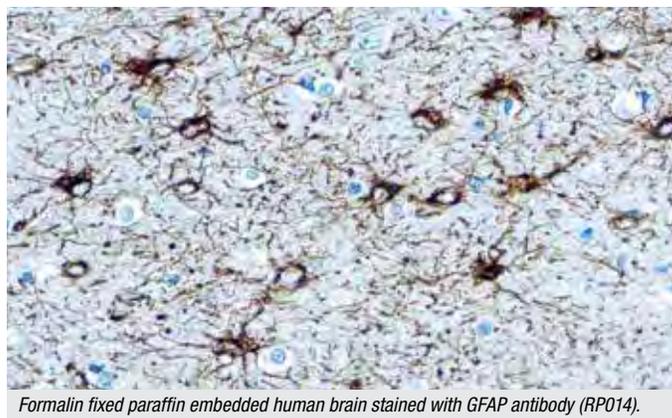
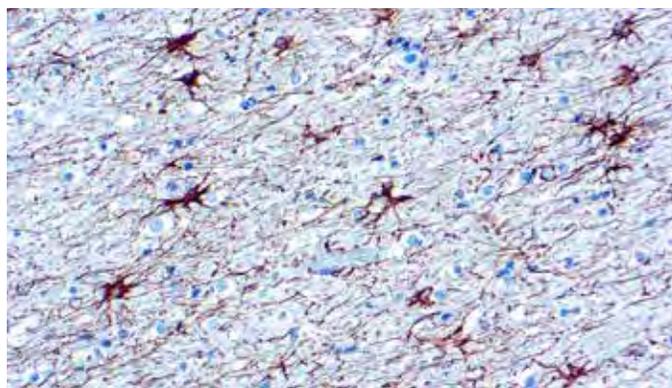
Formalin fixed paraffin embedded stomach stained with Gastrin antibody (RP044).

**Immunogen:** Recombinant gastrin conjugated to KLH.

**Positive Control:** Stomach

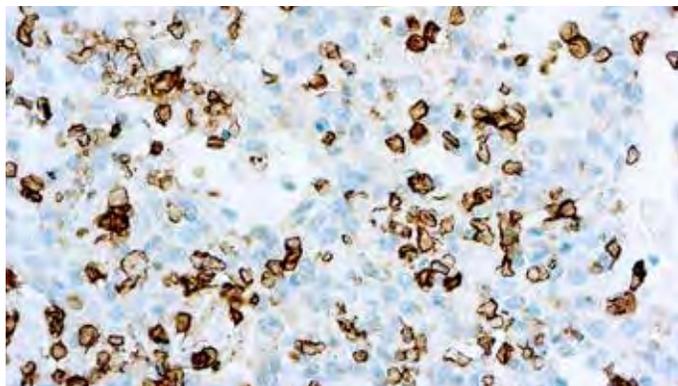
**Cellular Localization:** Cytoplasmic

**Specificity:** The antibody is specific against gastrin-containing cells. This anti-body reacts with human gastrin I and human gastrin I fragments. No cross-reactivity was observed with rat gastrin, human big gastrin, human gastrin releasing peptide, sulfated cholecystokinin amide, non-sulfated cholecystokinin amide and cholecystokinin.

**GATA-3****Clone:** L50-823**Catalog No.:** Mob564 Concentrated  
PDM564 Prediluted*Formalin fixed paraffin embedded breast carcinoma stained with GATA-3 (Mob564).***Immunogen:** Peptide between trans-activation and DNA-binding domains of GATA-3.**Isotype:** IgG1**Positive Control:** Breast carcinoma, urothelial carcinomas**Cellular Localization:** Nuclear**Specificity:** GATA3 expression is primarily seen in breast carcinoma and urothelial carcinoma. Anti-GATA3 can also be useful in the identification of unknown primary carcinoma when carcinomas of the breast or bladder are a possibility.**GCDFP-15****(Gross Cystic Disease Fluid Protein-15)****Clone:** DBM15.52**Catalog No.:** Mob526 Concentrated  
PDM261 Prediluted*Formalin fixed paraffin embedded human breast carcinoma stained with GCDFP-15 (Mob526).***Immunogen:** Recombinant human GCDFP-15 protein fragment (aa 41-146).**Isotype:** IgG2a, kappa**Positive Control:** Breast carcinoma**Cellular Localization:** Cytoplasmic (Golgi bodies) and Secreted**Specificity:** It recognizes a protein of 15kDa, identified as Gross cystic disease fluid protein 15 (GCDFP-15). It is a major protein component of benign breast gross cysts. It is a known marker of breast cancer, as it is found in approximately 50% of all breast cancer specimens. GCDFP-15, also known as PIP, for prolactin inducible protein, is a prolactin and androgen controlled protein. This antibody is useful in the identification of metastatic breast carcinoma, or fluid analysis.**GFAP (Glial Fibrillary Acidic Protein)****Catalog No.:** RP014 Concentrated  
PDR028 Prediluted*Formalin fixed paraffin embedded human brain stained with GFAP antibody (RP014).***Immunogen:** Glial fibrillary protein isolated from cow spinal cord.**Positive Control:** Brain**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with human GFAP. In the central nervous system, this antibody stains astrocytes and some groups of ependymal cells. However, in the peripheral nervous system, it stains Schwann cells, satellite cells and enteric glial cells.**GFAP (Glial Fibrillary Acidic Protein)****Clone:** GA5**Catalog No.:** Mob064 Concentrated  
PDM008 Prediluted*Formalin fixed paraffin embedded human brain stained with GFAP antibody (PDM008).***Immunogen:** BALB/C mice were immunized with glial fibrillary protein from porcine spinal cord.**Isotype:** IgG1, kappa**Positive Control:** Brain**Cellular Localization:** Cytoplasm**Specificity:** This antibody reacts with the 52 kDa intermediate filament protein GFAP in brain and spinal cord. It labels some astrocytes and some CNS ependymal cells but not oligodendrocytes or neurons. This antibody does not react with other intermediate filament proteins.

## GLUT-1

Catalog No.: **RP128 Concentrated**



Formalin fixed paraffin embedded human bladder stained with GLUT-1 antibody (RP128).

**Immunogen:** A synthetic peptide derived from C-terminal of human GLUT-1.

**Positive Control:** Breast carcinoma

**Cellular Localization:** Cytoplasmic

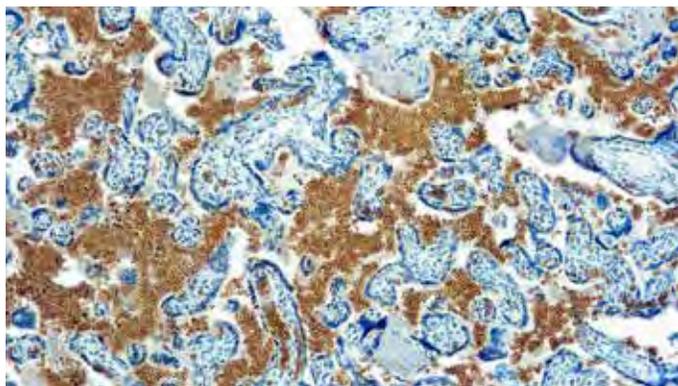
**Specificity:** This antibody reacts with a 55 kDa protein. Glucose is fundamental to the metabolism of mammalian cells. Several glucose transporter protein (Glut) isoforms have been identified and shown to function in response in insulin and IGF-1 induced signaling. GLUT-1 is detectable in many human tissues including those of the colon, lung, stomach, esophagus and breast. GLUT-1 immunoreactivity in some cancers, including trans-carcinoma of the urinary bladder, has been associated with aggressive behavior.

IVD only for markets outside the U.S. RUO for U.S. market.

## Glycophorin A

Clone: **JC159**

Catalog No.: **Mob066 Concentrated**  
**PDM124 Prediluted**



Formalin fixed paraffin embedded human placenta stained with Glycophorin A antibody (Mob066).

**Immunogen:** BALB/C mice were immunized with formalin fixed membrane from a hairy cell leukemia.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

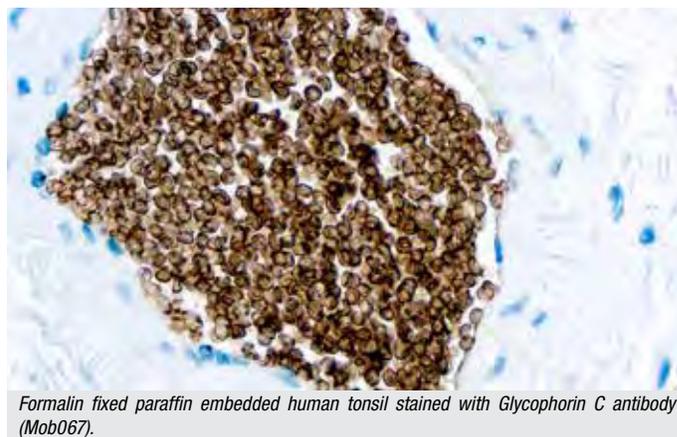
**Cellular Localization:** Cell membrane

**Specificity:** This antibody is specific to erythroid cells at various stages of differentiation from the erythroblast to the mature red cell.

## Glycophorin C

Clone: **Ret40f**

Catalog No.: **Mob067 Concentrated**  
**PDM578 Prediluted**



Formalin fixed paraffin embedded human tonsil stained with Glycophorin C antibody (Mob067).

**Immunogen:** BALB/C mice were injected with red cell ghosts.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane

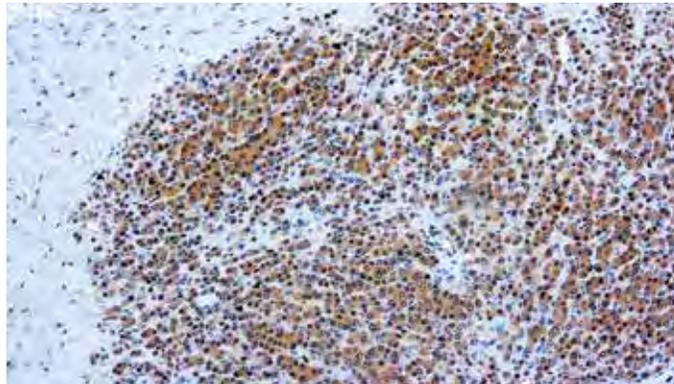
**Specificity:** This antibody is specific to  $\beta$  sialoglycophorin also known as glycophorin C. Glycophorin C is found on the human erythrocyte membrane and is one of four sialic acid-rich polypeptides.



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**Glypican-3****Clone:** YP7**Catalog No.:** Mob561 Concentrated  
PDM561 Prediluted

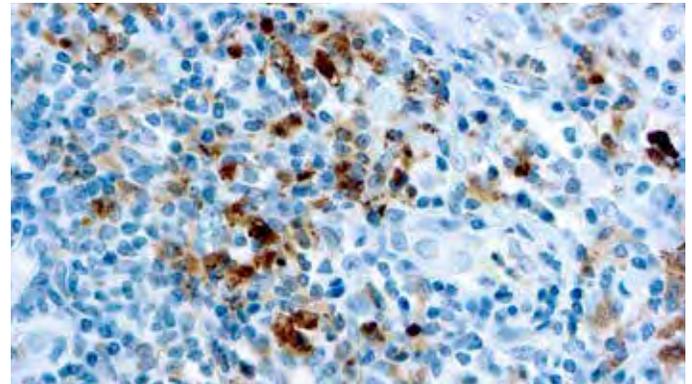
Formalin fixed paraffin embedded human hepatocellular carcinoma stained with Glypican-3 (Mob561).

**Immunogen:** Human Glypican-3**Isotype:** IgG1, Kappa**Positive Control:** Thyroid carcinoma, hepatocellular carcinoma**Cellular Localization:** Cytoplasmic

**Specificity:** Glypican-3 (GPC3) is a glycosylphosphatidylinositol-anchored membrane protein, which may also be found in a secreted form. Anti-GPC3 has been identified as a useful tumor marker for the diagnosis of hepatocellular carcinoma (HCC), hepatoblastoma, melanoma, testicular germ cell tumors, and Wilms' tumor. In patients with HCC, GPC3 is overexpressed in neoplastic liver tissue and elevated in serum, but is undetectable in normal liver, benign liver, and the serum of healthy donors. GPC3 expression is also found to be higher in HCC liver tissue than in cirrhotic liver or liver with focal lesions such as dysplastic nodules and areas of hepatic adenoma (HA) with malignant transformation. In the context of testicular germ cell tumors, GPC3 expression is up regulated in certain histologic subtypes, specifically yolk sac tumors and choriocarcinoma. A high level of GPC3 expression is also found in some types of embryonal tumors, such as Wilms' tumor and hepatoblastoma, with a low or undetectable expression in normal adjacent tissue. In patients with thyroid cancer, expression of GPC3 is dramatically enhanced in certain types of cancers: 100% in follicular carcinoma and 70% in papillary carcinoma. Expression of GPC3 in follicular carcinoma is significantly higher than that of follicular adenoma. In contrast, GPC3 is not expressed in anaplastic carcinoma.

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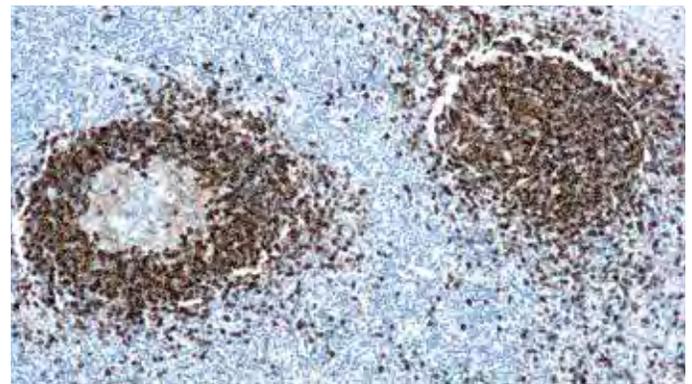
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**Granzyme B****Catalog No.:** RP105 Concentrated  
PDR050 Prediluted

Formalin fixed paraffin embedded human Hodgkin's lymphoma stained with Granzyme B antibody (RP105).

**Immunogen:** A synthetic peptide from the N-terminus of human granzyme B.**Positive Control:** Tonsil**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a 32 kDa protein. Granzymes are neutral serine proteases, which are stored in specialized lytic granules of cytotoxic T lymphocytes (CTL) and in natural killer (NK) cells. A number of granzymes (A to G) have been isolated and cloned. Human granzyme B is involved in target cell apoptosis during lymphocyte-mediated cytotoxicity. This antibody is useful in the localization of granzyme B containing lytic granules and for the characterization of activated CTL or NK cells.

**Hairy Cell Leukemia****Clone:** DBA.44**Catalog No.:** Mob200 Concentrated  
PDM024 Prediluted

Formalin fixed paraffin embedded human tonsil stained with Hairy Cell Leukemia antibody (PDM024).

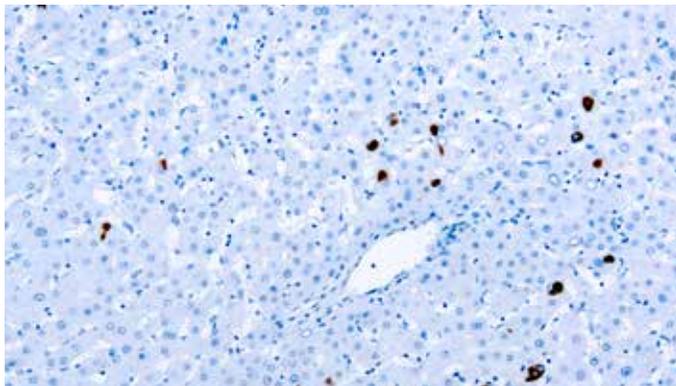
**Immunogen:** DEAU cell line established from a large cell lymphoma.**Isotype:** IgM, kappa**Positive Control:** Tonsil**Cellular Localization:** Cell membrane, cytoplasmic

**Specificity:** This antibody reacts with a subset of B-lymphocytes localized in the follicular mantle zone. It reacts with 97% of hairy cell leukemia cases. This antibody shows strong positive staining of about 35% of cases of high grade B cell lymphomas.

## HBsAg

Clone: 5C3

Catalog No.: Mob570 Concentrated  
PDM570 Prediluted



Formalin fixed paraffin embedded human liver stained with Hepatitis B Surface Antigen (5C3) (Mob570).

**Immunogen:** HBsAg (ad/ay) protein.

**Isotype:** IgG2a

**Positive Control:** Infected liver

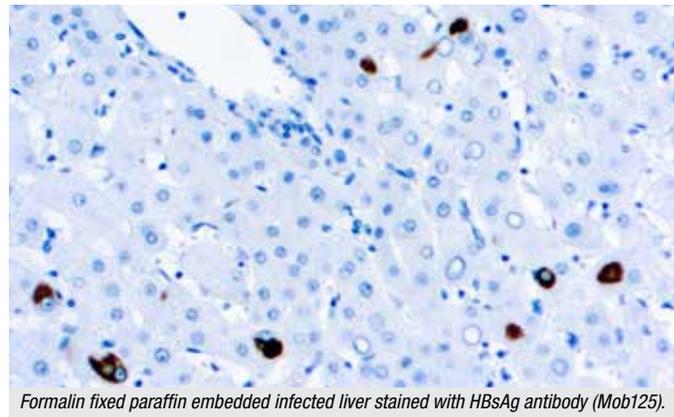
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody stains the cytoplasm of antigen-positive liver cells in patients with Type B viral hepatitis. This antibody reacts with the 'a' determinant present on the HBsAg subtypes ayw1, ayw2, ayw3, ayw4, ayr, adw2, adw4 and adr. It does not react with normal tissues.

## Hepatitis B Surface Antigen, HBsAg

Clone: 3E7

Catalog No.: Mob125 Concentrated  
PDM079 Prediluted



Formalin fixed paraffin embedded infected liver stained with HBsAg antibody (Mob125).

**Immunogen:** Purified HBsAg subtype ayw3.

**Isotype:** IgG1

**Positive Control:** Infected liver

**Cellular Localization:** Cytoplasmic

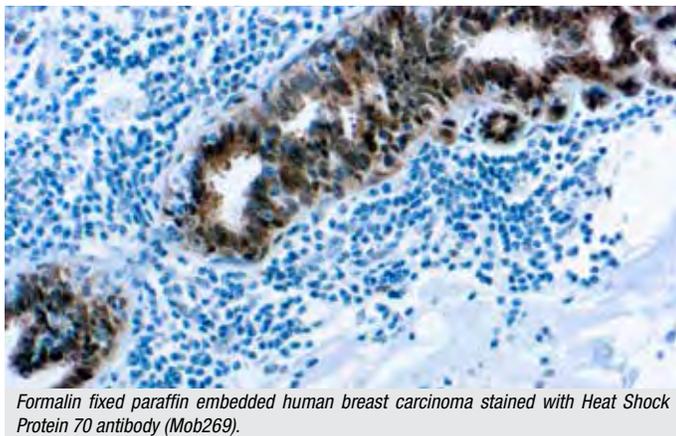
**Specificity:** This antibody stains the cytoplasm of antigen-positive liver cells in patients with Type B viral hepatitis. This antibody reacts with the 'a' determinant present on the HBsAg subtypes ayw1, ayw2, ayw3, ayw4, ayr, adw2, adw4 and adr. It does not react with normal tissues.

IVD only for markets outside the U.S. RUO for U.S. market.

## Heat Shock Protein 70 (HSP 70)

Clone: W27

Catalog No.: Mob269 Concentrated



Formalin fixed paraffin embedded human breast carcinoma stained with Heat Shock Protein 70 antibody (Mob269).

**Immunogen:** BALB/C mice were injected with purified HSP70 protein.

**Isotype:** IgG2a

**Positive Control:** Breast carcinoma

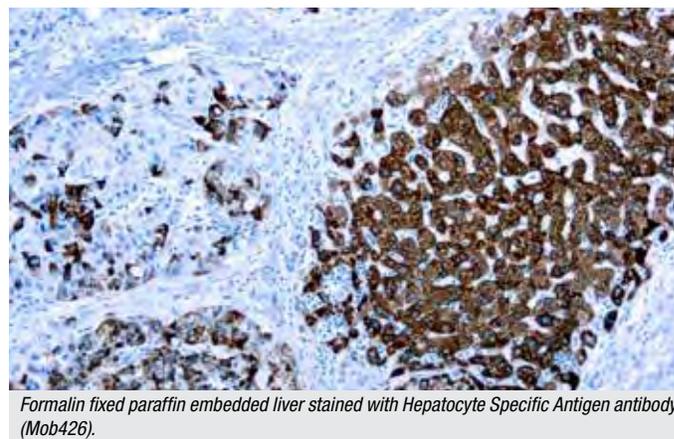
**Cellular Localization:** Cytoplasmic and nuclear

**Specificity:** This antibody is specific to constitutive (HSP73) and inducible (HSP72) form of HSP70. HSP70 is found to be associated with steroid receptors, actin, p53, polyoma T antigen, nucleotides and other known proteins. HSP70 has been shown to be involved in protective roles against thermal stress, cytotoxic drugs and other damaging conditions.

## Hepatocyte Specific Antigen (HSA/HepPar-1)

Clone: OCH1E5

Catalog No.: Mob426 Concentrated  
PDM162 Prediluted



Formalin fixed paraffin embedded liver stained with Hepatocyte Specific Antigen antibody (Mob426).

**Immunogen:** Human liver fixed in formalin.

**Isotype:** IgG1

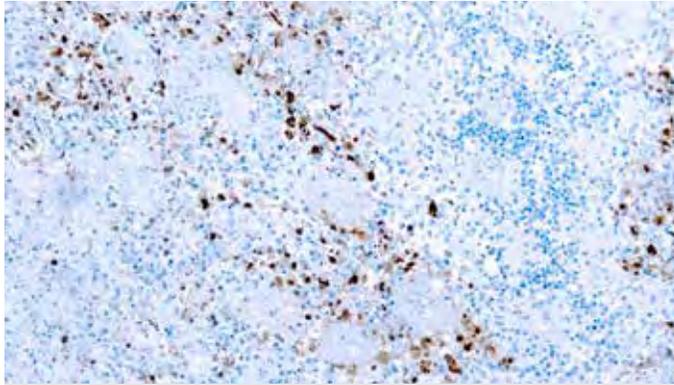
**Positive Control:** Liver

**Cellular Localization:** Cytoplasmic

**Specificity:** Hepatoblastoma is the most common primary tumor of the liver in children. The use of specific hepatocyte markers and also of  $\alpha$  fetoprotein or carcinoembryonic antigen are useful for the identification of normal and malignant fetal hepatocytes. This antibody recognizes an uncharacterized antigen present in both adults and fetal normal hepatocytes to produce a distinct granular cytoplasmic staining. This antibody stains majority of hepatocellular carcinomas.

**Herpes Simplex Virus Type I (HSV1)**

**Catalog No.:** RP018 Concentrated  
PDR032 Prediluted



Formalin fixed paraffin embedded Infected tissue stained with HSV I antibody (RP018).

**Immunogen:** Whole rabbit corneal cells, infected with herpes simplex virus type I (strain Mac Intyre), were solubilized with detergent.

**Positive Control:** Infected tissue

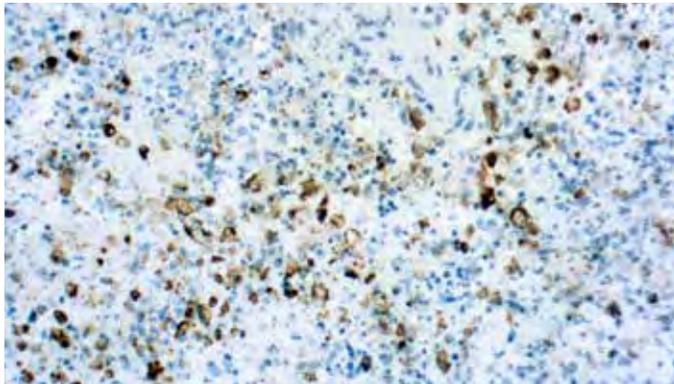
**Cellular Localization:** Cytoplasmic, nuclear

**Specificity:** This antibody reacts with HSV type I specific antigens and with antigens common to HSV type I and II virus. It reacts with all the major glycoproteins present in the viral envelope as well as with at least one core protein.

*IVD only for markets outside the U.S. RUO for U.S. market.*

**Herpes Simplex Virus Type II (HSV II)**

**Clone:** DBM15.69  
**Catalog No.:** Mob542 Concentrated  
PDM542 Prediluted



Formalin fixed paraffin embedded human infected tissue stained with Herpes Simplex Virus Type II antibody (Mob542).

**Immunogen:** BALB/C mice were immunized with Parker strain of herpes simplex virus type 2.

**Isotype:** IgG1

**Positive Control:** Infected tissue

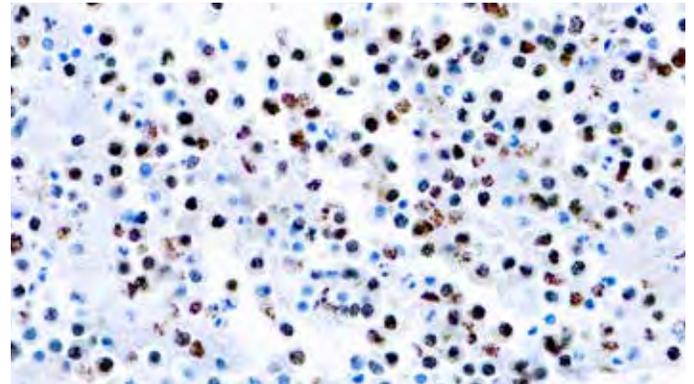
**Cellular Localization:** Cytoplasmic, nuclear

**Specificity:** This antibody reacts with herpes simplex virus type 2. It is specific for the viral glycoprotein D (gD) protein.

*IVD only for markets outside the U.S. RUO for U.S. market.*

**Herpesvirus 8 (HHV8)**

**Clone:** LN53  
**Catalog No.:** Mob395 Concentrated  
PDM395 Prediluted



Cultured cells infected with HHV8 stained with HHV8 antibody (Mob395).

**Immunogen:** Recombinant protein corresponding to the latent nuclear antigen-1 molecule of HHV8.

**Isotype:** IgG2c

**Positive Control:** Kaposi sarcoma

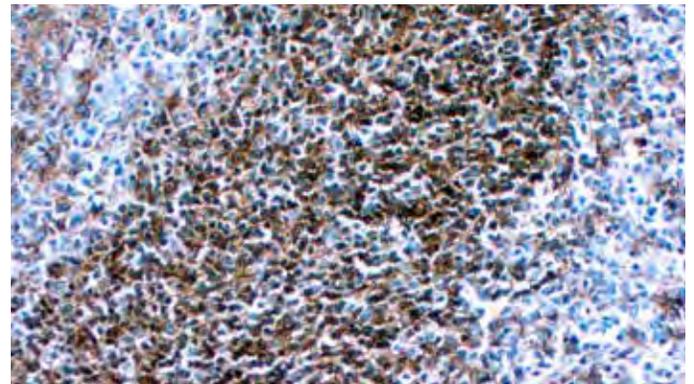
**Cellular Localization:** Nuclear

**Specificity:** This antibody stains with ORF-73 of human herpesvirus 8 (HHV8). HHV8 is the likely etiological agent of Kaposi sarcoma (KS). HHV8 encodes a latent nuclear antigen (LNA), which is the product of the viral gene ORF 73. LNA is capable of forming a complex with retinoblastoma susceptibility gene product, which may be related to its oncogenic activity.

*IVD only for markets outside the U.S. RUO for U.S. market.*

**HLA-DR (β chain of DP, DQ & DR)**

**Clone:** CR3/43  
**Catalog No.:** Mob069R Concentrated  
PDM082R Prediluted



Formalin fixed paraffin embedded human tonsil stained with HLA-DR antibody (Mob069R).

**Immunogen:** Tonsil cells

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

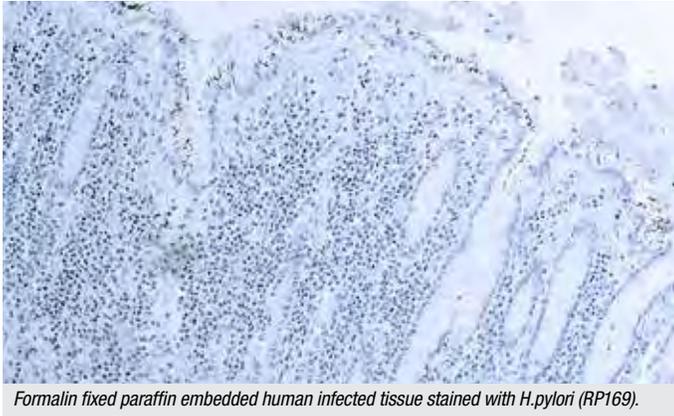
**Cellular Localization:** Cell membrane

**Specificity:** This antibody reacts with the β chain of all products of the gene sub regions DP, DQ, and DR. It stains B cells, interdigitating reticulum cells, Langerhans cells and many macrophages. This antibody does not react with normal T cell and polymorphs but stains activated T cells.

*RUO for all markets.*

## H. pylori

Catalog No.: **RP169 Concentrated**  
**PDR169 Prediluted**



Formalin fixed paraffin embedded human infected tissue stained with H.pylori (RP169).

**Immunogen:** Total Lysate of H.Pylori

**Positive Control:** Infected stomach

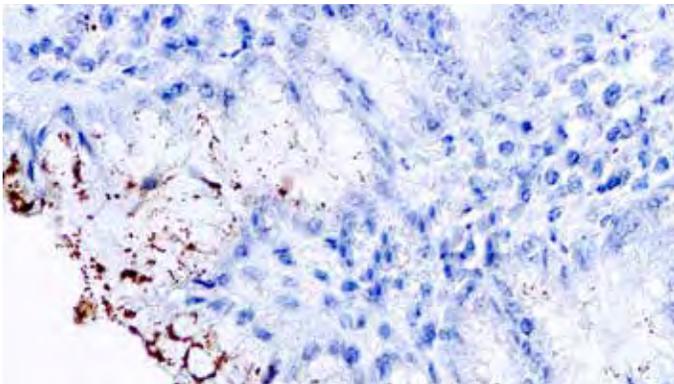
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the 54 kDa (flagellin) of H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

## H. pylori

Clone: **DBM15.75**

Catalog No.: **Mob559 Concentrated**  
**PDM559 Prediluted**



Formalin fixed paraffin embedded human stomach infected with H.pylori and stained with H.pylori antibody (PDM559).

**Immunogen:** Helicobacter pylori

**Isotype:** IgG1

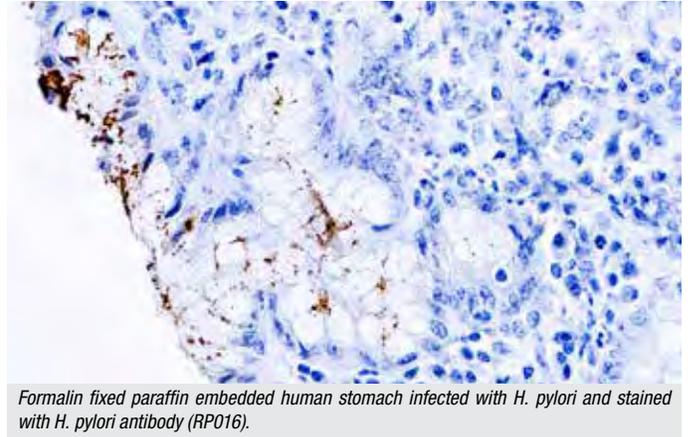
**Positive Control:** Infected stomach

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the 54 kDa (flagellin) of H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

## H. pylori (Helicobacter pylori)

Catalog No.: **RP016 Concentrated**  
**PDR053 Prediluted**



Formalin fixed paraffin embedded human stomach infected with H. pylori and stained with H. pylori antibody (RP016).

**Immunogen:** Total lysate of H. pylori.

**Positive Control:** Infected stomach

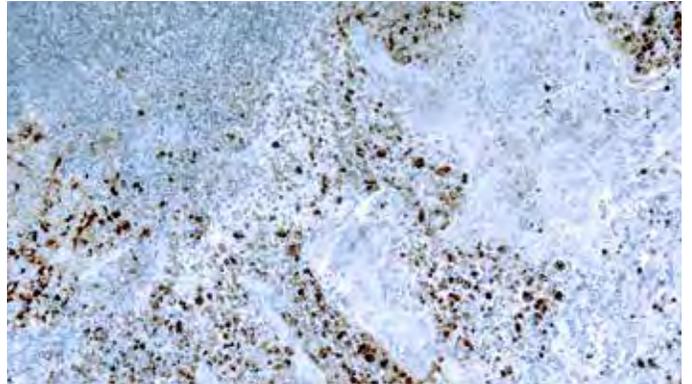
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the whole H. pylori. The antibody stains the bacteria present on the surface of the epithelium or in the cytoplasm of the epithelial cells. H. pylori is known to cause peptic ulcer and chronic gastritis in humans.

## HSV Cocktail

(Rabbit anti-HSV I + Mouse anti-HSV II)

Catalog No.: **PDRM001 Prediluted**



Formalin fixed paraffin embedded human infected tissue stained with Herpes Simplex Virus Type I and Type II antibody (PDRM001).

**Immunogen:** Whole rabbit corneal cells, infected with herpes simplex virus type I (strain Mac Intyre) and BALB/C mice immunized with Parker strain of herpes simplex virus type 2.

**Positive Control:** Infected tissue

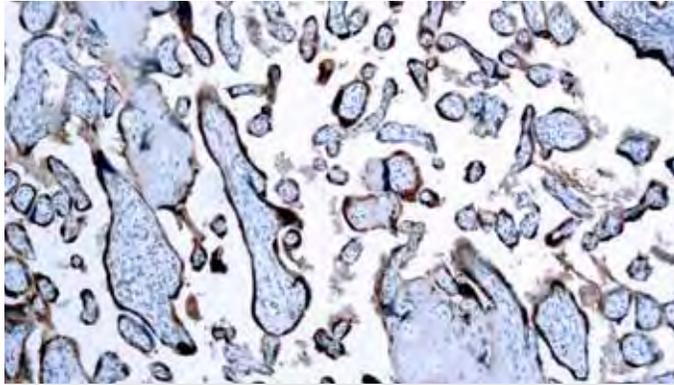
**Cellular Localization:** Cytoplasmic, nuclear

**Specificity:** This antibody reacts with HSV type I and II specific antigens and with antigens common to HSV type I and II virus. It reacts with all the major glycoproteins present in the viral envelope as well as with at least one core protein.

IVD only for markets outside the U.S. RUO for U.S. market.

**Human Chorionic Gonadotropin (hCG)**

**Catalog No.:** RP007 Concentrated  
PDR030 Prediluted



Formalin fixed paraffin embedded human placenta stained with hCG antibody (RP007).

**Immunogen:**  $\beta$  chain of human chorionic gonadotropin.

**Positive Control:** Placenta

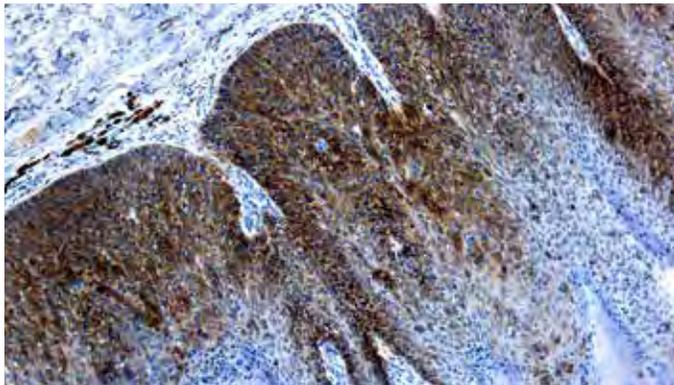
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with hCG. It stains strongly with the human placenta and placental trophoblasts.

**Human Papilloma Virus Type 16 (HPV 16)**

**Clone:** CAMVIR-1

**Catalog No.:** Mob394 Concentrated  
PDM166 Prediluted



Formalin fixed paraffin embedded cervix Ca stained with HPV-16 antibody (Mob394).

**Immunogen:** BALB/C mice were immunized with recombinant HPV-16 L1 protein.

**Isotype:** IgG2a

**Positive Control:** HPV type 16 infected cervix

**Cellular Localization:** Nuclear

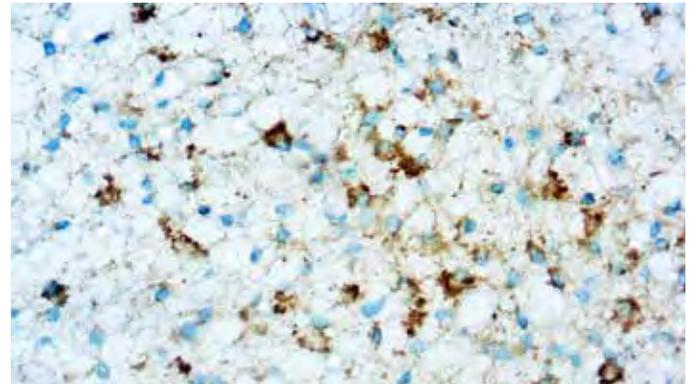
**Specificity:** This antibody stains with HPV type 16. L1 protein is a major capsid protein of HPV type 16. HPV 6 and 11 have been associated with relatively benign diseases such as genital warts but type 16 and 18 are strongly associated with cervical, vaginal and vulvar malignancies.

IVD only for markets outside the U.S. RUO for U.S. market.

**IDH1**

**Clone:** Smab-1

**Catalog No.:** Mob582R Concentrated  
PDM582R Prediluted



Formalin fixed paraffin embedded Anaplastic Oligodendrogliom stained with IDH1 (Mob580).

**Immunogen:** KLH-conjugated linear peptide corresponding to human Isocitrate Dehydrogenase 1 (IDH1)-R132S.

**Positive Control:** Human Glioma tissue

**Isotype:** IgG1 $\kappa$

**Cellular localization :** Cytoplasmic/nuclear

**Specificity:** Isocitrate dehydrogenase 1 (IDH1) is a 46 kDa NADP-dependent enzyme, which catalyzes the decarboxylation of isocitrate into  $\alpha$ -ketoglutarate. IDH1 may also play a role in the prevention of oxidative damage, and the shuttling of proteins to peroxisomes. It is widely reported that mutations in IDH1 result in multiple forms of gliomas. The Arginine to Serine substitution at amino acid 132 is seen in gliomas, abolishes magnesium binding and alters enzyme activity so that isocitrate is no longer converted to alpha-ketoglutarate but instead alpha-ketoglutarate is converted to R(-)-2-hydroxyglutarate..

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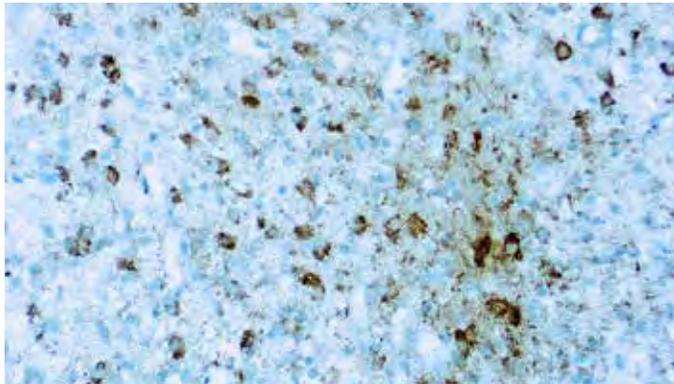
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## IDH1

Clone: Hmab-1

Catalog No.: Mob580R Concentrated  
PDM580R Prediluted



Formalin fixed paraffin embedded Anaplastic Oligodendroglioma stained with IDH1 (Mob580R).

**Immunogen:** KLH-conjugated linear peptide corresponding to human Isocitrate Dehydrogenase 1 (IDH1).

**Isotype:** IgG1, kappa

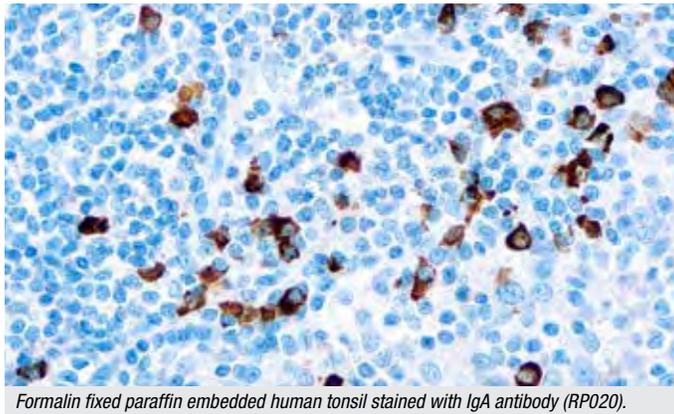
**Cellular localization :** Cytoplasm

**Specificity:** Monoclonal Anti-IDH1 (R132H) recognizes only the R132H mutation of human IDH1 (R132H) and does not cross react with other mutations. The most frequent known mutation (>90%) is the alteration of arginine to histidine (R132H).<sup>6</sup> Hence, antibodies that recognize the IDH1R132H mutation can be useful for the diagnosis of mutation-bearing tumors like gliomas.

RUO for all markets.

## IgA

Catalog No.: RP020 Concentrated  
PDR017 Prediluted



Formalin fixed paraffin embedded human tonsil stained with IgA antibody (RP020).

**Immunogen:** IgA isolated from a pool of normal human sera.

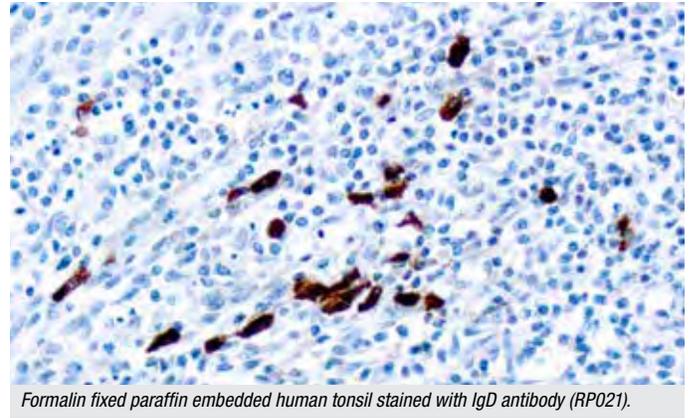
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with  $\alpha$ -chains of human IgA. This antibody has been adsorbed to a very high level of specificity.

## IgD

Catalog No.: RP021 Concentrated



Formalin fixed paraffin embedded human tonsil stained with IgD antibody (RP021).

**Immunogen:** IgD isolated from a pool of normal human plasma.

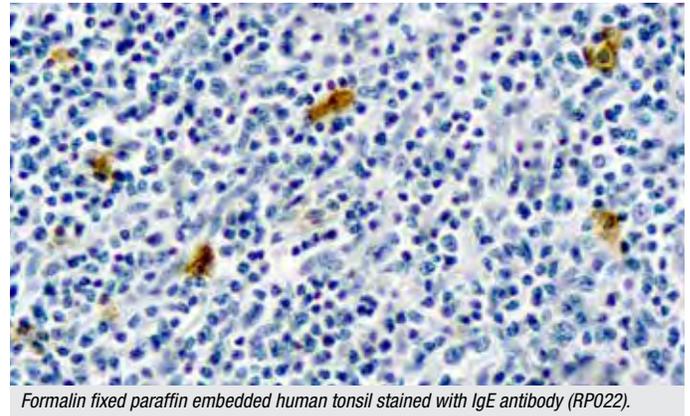
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the  $\delta$  chain of human IgD. Traces of contaminating antibodies have been removed by solid phase adsorption. Only the IgD arch appeared in crossed immunoelectrophoresis.

## IgE

Catalog No.: RP022 Concentrated



Formalin fixed paraffin embedded human tonsil stained with IgE antibody (RP022).

**Immunogen:** IgE isolated from the serum of a patient with IgE-myeloma.

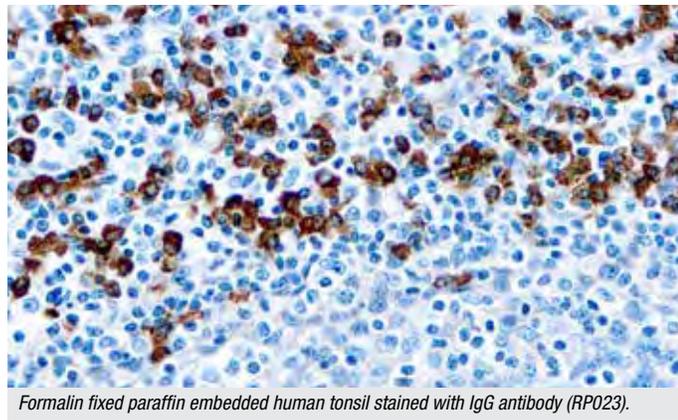
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the  $\epsilon$  chain of human IgE. Traces of contaminating antibodies have been removed by solid phase adsorption. Only the IgE arch appeared in crossed immunoelectrophoresis.

**IgG**

**Catalog No.:** RP023 Concentrated  
PDR018 Prediluted



Formalin fixed paraffin embedded human tonsil stained with IgG antibody (RP023).

**Immunogen:** IgG isolated from a pool of normal human sera.

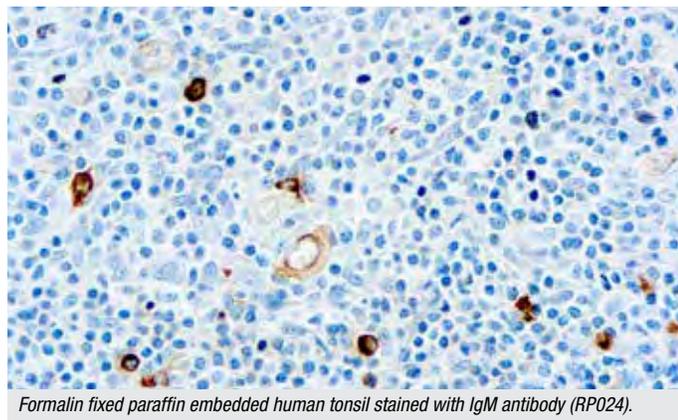
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with  $\gamma$ -chains of human IgG. Nonspecific antibodies have been removed by solid-phase adsorption.

**IgM**

**Catalog No.:** RP024 Concentrated  
PDR019 Prediluted



Formalin fixed paraffin embedded human tonsil stained with IgM antibody (RP024).

**Immunogen:** IgM isolated from human serum of a patient.

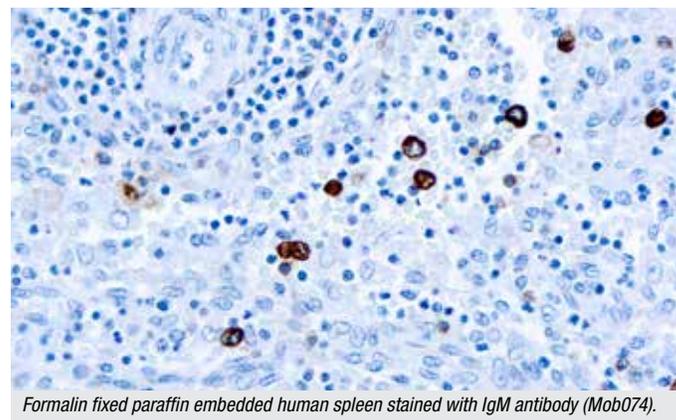
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with the mu-chains of human IgM. Nonspecific antibodies have been removed by solid-phase adsorption.

**IgM (R1/69)**

**Clone:** R1/69  
**Catalog No.:** Mob074 Concentrated  
PDM053 Prediluted



Formalin fixed paraffin embedded human spleen stained with IgM antibody (Mob074).

**Immunogen:** Human lymphoid cells.

**Isotype:** IgG1, kappa

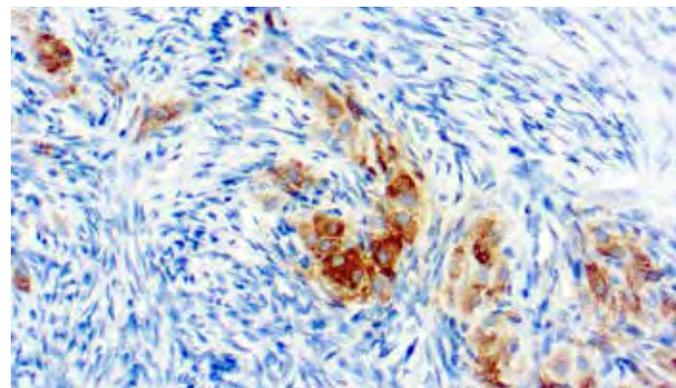
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasm

**Specificity:** This antibody reacts with the heavy chain present in all types of human IgM. It stains B cell follicles in human lymphoid tissues. In lymphoid tissues, IgM containing plasma cells stain strongly but immune complexes are usually undetectable.

**Inhibin  $\alpha$** 

**Clone:** R1  
**Catalog No.:** Mob435 Concentrated  
PDM178 Prediluted



Formalin fixed paraffin embedded human ovary stained with Inhibin  $\alpha$  antibody (Mob435).

**Immunogen:** Synthetic peptide corresponding to the 1-32 amino terminal peptide of the  $\alpha$  subunit of human inhibin.

**Isotype:** IgG2a

**Positive Control:** Ovary

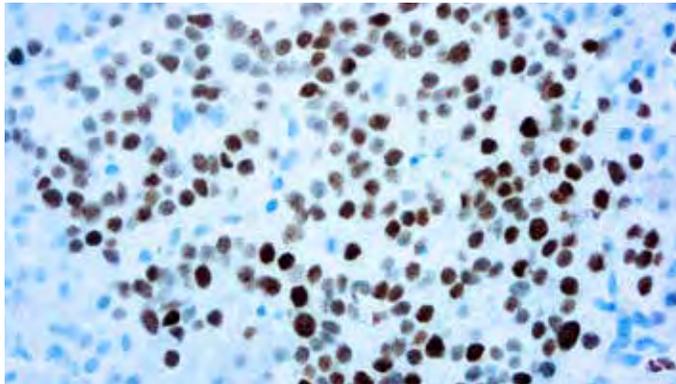
**Cellular Localization:** Cytoplasmic

**Specificity:** Inhibin is a dimeric glycoprotein hormone from the TGF- $\beta$  family made of  $\alpha$  and  $\beta$  subunits. This antibody recognizes the 32kDa  $\alpha$  subunit of human inhibin. Inhibin  $\alpha$  is expressed in a wide variety of human tissues, such as brain, prostate, adrenal, granulosa cells of ovary, sertoli cells of testis and in fetoplacental unit.

## INSM1

Clone: A-8

Catalog No.: Mob586 Concentrated  
PDM586 Prediluted



Formalin fixed paraffin embedded human Pancreas stained with INSM1 25x (Mob586).

**Immunogen:** Amino acid 81-125 at the N-terminus of human INSM1.

**Isotype:** IgG1, kappa

**Positive Control:** Neuroendocrine tumor

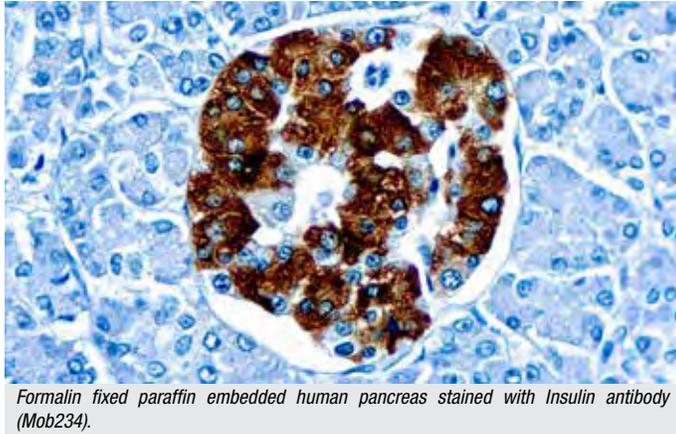
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is raised against amino acids 81-125 mapping near the N-terminus of INSM1 of human origin.

## Insulin

Clone: K36aC10

Catalog No.: Mob234 Concentrated  
PDM270 Prediluted



Formalin fixed paraffin embedded human pancreas stained with Insulin antibody (Mob234).

**Immunogen:** Human insulin.

**Isotype:** IgG1

**Positive Control:** Pancreas

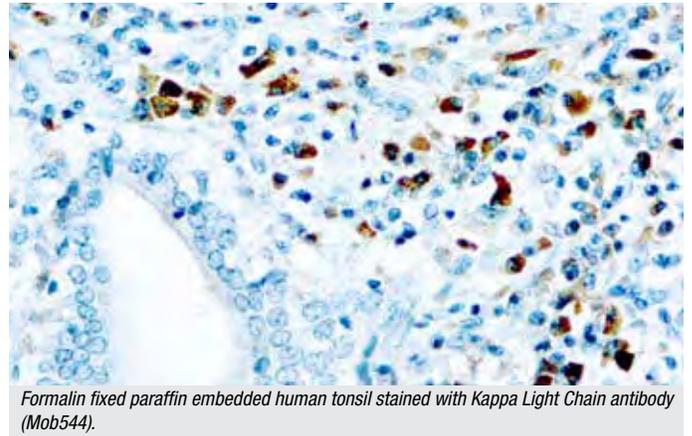
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes purified insulin from the pancreas of human, as well as proinsulin from human.

## Kappa Light Chain

Clone: KP-53

Catalog No.: Mob544 Concentrated  
PDM055 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Kappa Light Chain antibody (Mob544).

**Immunogen:** BALB/C mice were immunized with purified Bence Jones kappa light chain protein.

**Isotype:** IgG2b

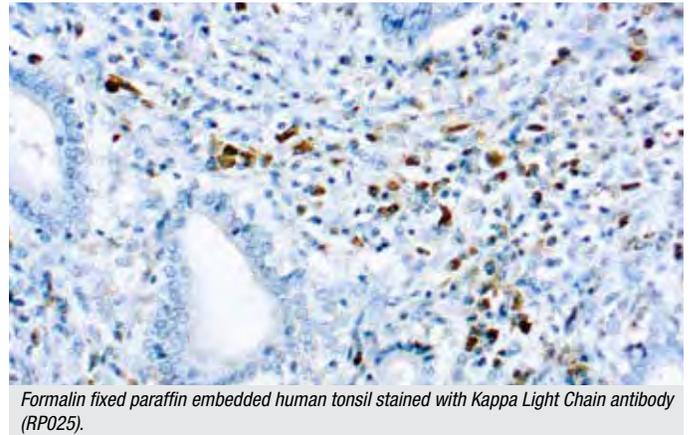
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasm

**Specificity:** This antibody reacts with B cell follicles in lymphoid tissues. The mantle zones give a mosaic pattern, while the germinal centers show a coarse meshwork pattern of staining. This antibody stains free as well as bound kappa light chains. This antibody does not react with human lambda light chain.

## Kappa Light Chain

Catalog No.: RP025 Concentrated  
PDR015 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Kappa Light Chain antibody (RP025).

**Immunogen:** Kappa light chains isolated from pooled urine of patients with Bence Jones proteinuria.

**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

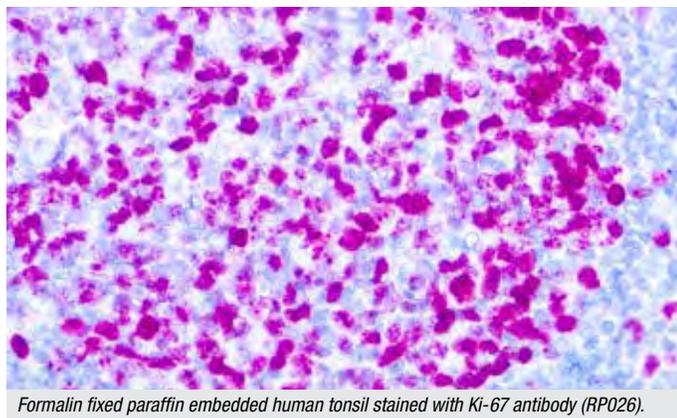
**Specificity:** This antibody reacts with free as well as bound kappa light chains. Contaminating antibodies have been removed by solid phase adsorption.

**Ki-67**

**Catalog No.:** RP026 Concentrated  
PDR048 Prediluted



IVD



Formalin fixed paraffin embedded human tonsil stained with Ki-67 antibody (RP026).

**Immunogen:** Synthetic peptide from 62 base pair region of the human Ki-67 antigen.

**Positive Control:** Tonsil

**Cellular Localization:** Nuclear

**Specificity:** This antibody reacts with a nuclear antigen present in proliferating human cells. It can be used to evaluate the Ki-67 labeling index in various tumors.

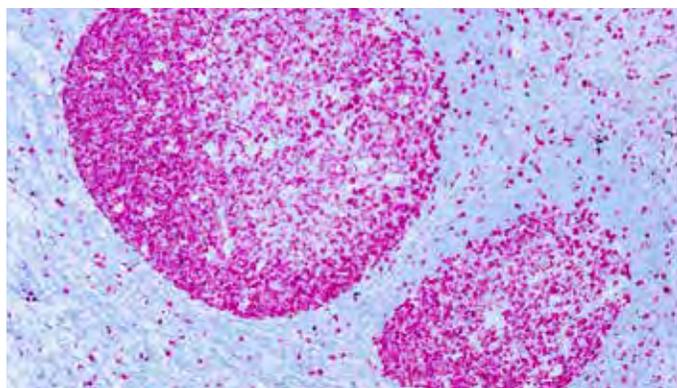
**Ki-67**

**Clone:** SP6

**Catalog No.:** RMAB004 Concentrated  
RMPD004 Prediluted



IVD



Formalin fixed paraffin embedded human tonsil stained with Ki-67 antibody (RMAB004).

**Immunogen:** A synthetic peptide from C-terminus of human Ki-67.

**Isotype:** IgG

**Positive Control:** Tonsil

**Cellular Localization:** Nuclear

**Specificity:** Ki-67 is a nuclear protein, which is expressed in proliferating cells. Ki-67 is preferentially expressed during late G1-, S-, M-, and G2-phases of the cell cycle, while cells in the G0 (quiescent) phase are negative for this protein.

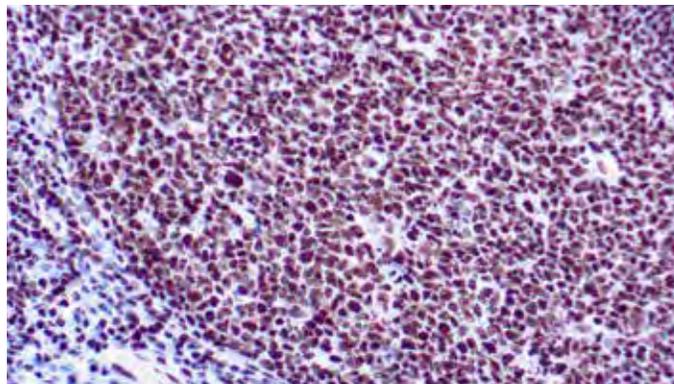
**Ku(p70)**

**Clone:** H-6

**Catalog No.:** Mob557 Concentrated



IVD



Formalin fixed paraffin embedded human tonsil stained with Ku(p70) antibody (Mob557).

**Immunogen:** Ku-(p70) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 583-608 at the C-terminus of KU-70 of human origin.

**Isotype:** IgG1

**Positive Control:** Tonsil

**Cellular Localization:** Nuclear

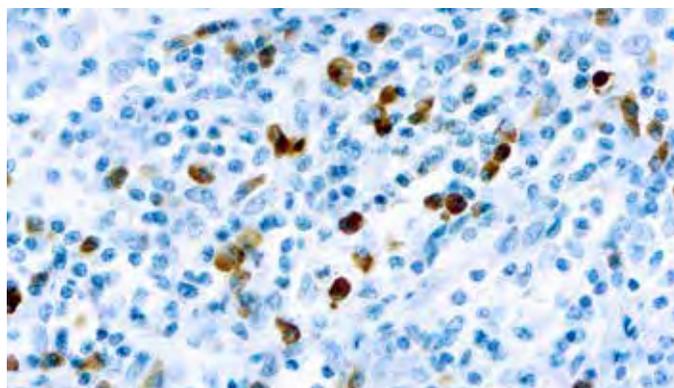
**Specificity:** This antibody reacts with a 70 kD protein known as Ku (p70). The Ku protein is localized in the nucleus and is composed of subunits referred to as Ku-70 (or p70) and Ku-86 (or p86). Both subunits of the Ku protein have been cloned, and a number of functions have been proposed for Ku, including cell signaling, DNA replication and transcriptional activation. Ku is involved in Pol II-directed transcription by virtue of its DNA binding activity, serving as the regulatory component of the DNA-associated protein kinase that phosphorylates Pol II and transcription factor Sp.

**Lambda Light Chain**

**Catalog No.:** RP027 Concentrated  
PDR016 Prediluted



IVD



Formalin fixed paraffin embedded human tonsil stained with Lambda Light Chain antibody (RP027).

**Immunogen:** Lambda light chains isolated from pooled urine of patients with Bence Jones proteinuria.

**Positive Control:** Tonsil

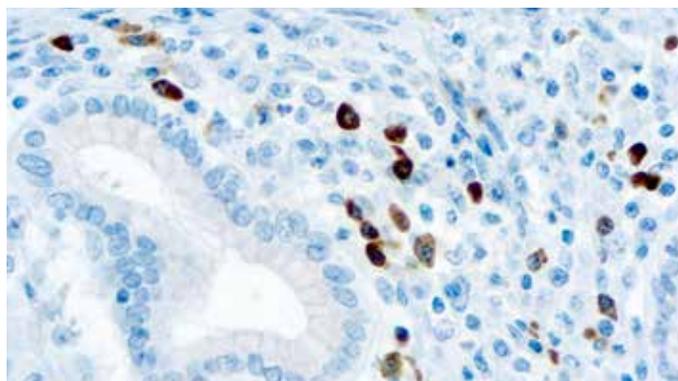
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with free as well as bound lambda light chains. Contaminating antibodies have been removed by solid phase adsorption.

## Lambda Light Chain

Clone: N10/2

Catalog No.: Mob077 Concentrated  
PDM056 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Lambda Light Chain antibody (Mob077).

**Immunogen:** BALB/C mice were immunized with purified IgG from human serum.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

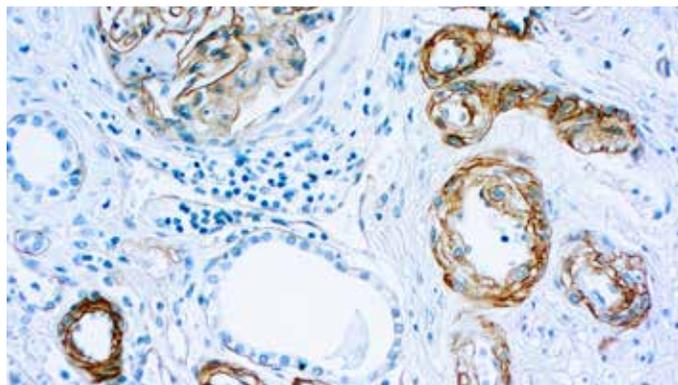
**Cellular Localization:** Cytoplasm

**Specificity:** This antibody does not show any cross-reactivity with kappa light chain. It stains B cell follicles in human lymphoid tissues. The mantle zone shows a mosaic pattern of labeling while the germinal centers show a coarse meshwork pattern of staining.

## Laminin

Clone: 4C7

Catalog No.: Mob202 Concentrated  
PDM568 Prediluted



Formalin fixed paraffin embedded renal carcinoma stained with Laminin antibody (Mob202).

**Immunogen:** The A chain of human laminin.

**Isotype:** IgG2a, kappa

**Positive Control:** Skin

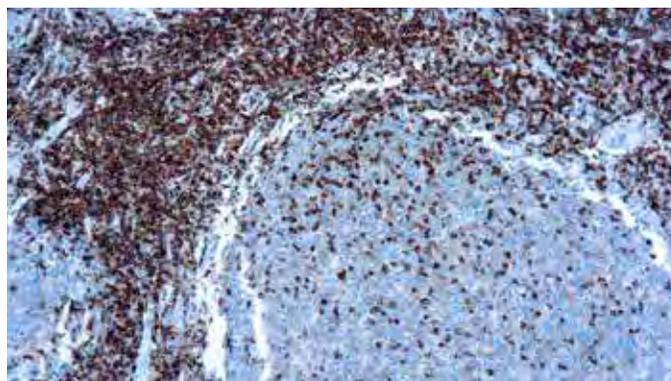
**Cellular Localization:** Basement membrane

**Specificity:** This antibody reacts with the terminal globular domain of the A chain. The staining with this antibody is sensitive to fixation of paraffin tissues and use of proteolytic enzymatic treatment.

## Leukocyte Common Antigen (LCA)/CD45

Clone: PD7/26 + 2B11

Catalog No.: Mob040 Concentrated  
PDM009 Prediluted



Formalin fixed paraffin embedded human tonsil stained with CD45/LCA antibody (PDM009).

**Immunogen:** BALB/C mice were immunized with human peripheral blood lymphocytes to raise clone PD7/26 and with isolated neoplastic cells from T cell lymphoma to raise clone 2B11.

**Isotype:** Both clones, IgG1, kappa

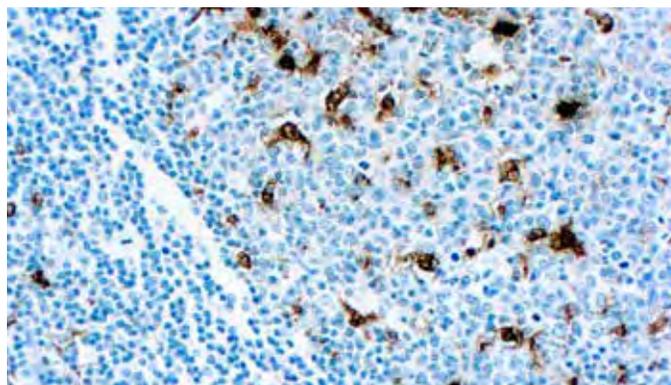
**Positive Control:** Tonsil

**Cellular Localization:** Cell membrane

**Specificity:** The human leukocyte common antigen is a family of five or more high molecular weight glycoproteins of MW 180, 190, 205 and 220 kDa, present on the surface of the majority of human leukocytes. This antibody labels lymphoid cells. It labels neoplastic B and T cells in non-Hodgkin lymphoma and in leukemias of B and T cell types.

## Lysozyme/Muramidase

Catalog No.: RP028 Concentrated  
PDR005 Prediluted



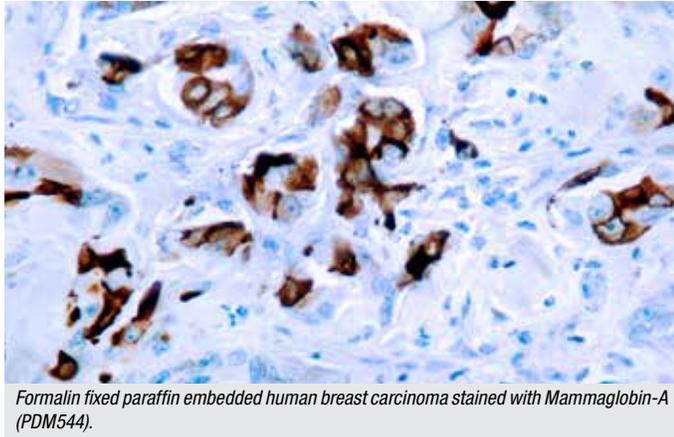
Formalin fixed paraffin embedded human tonsil stained with Lysozyme antibody (RP028).

**Immunogen:** Lysozyme isolated from urine of patients with monocytic leukemia.

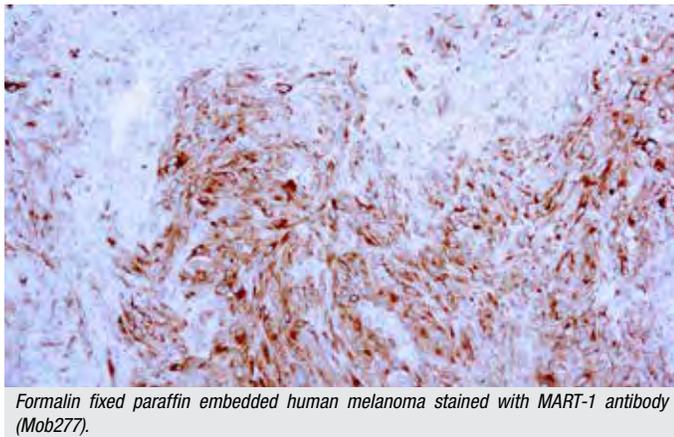
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

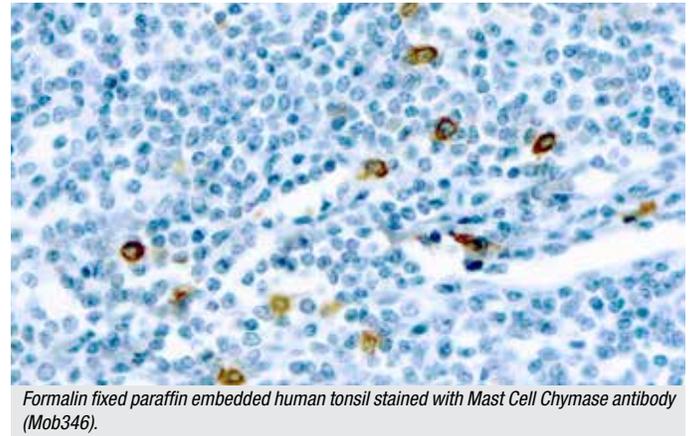
**Specificity:** This antibody reacts with lysozyme. It stains granulocytes, monocytes and macrophages in human tonsil, skin and colon. This antibody does not cross-react with any other cell types.

**Mammaglobin-A****Clone:** 304-1A5**Catalog No.:** PDM544 Prediluted

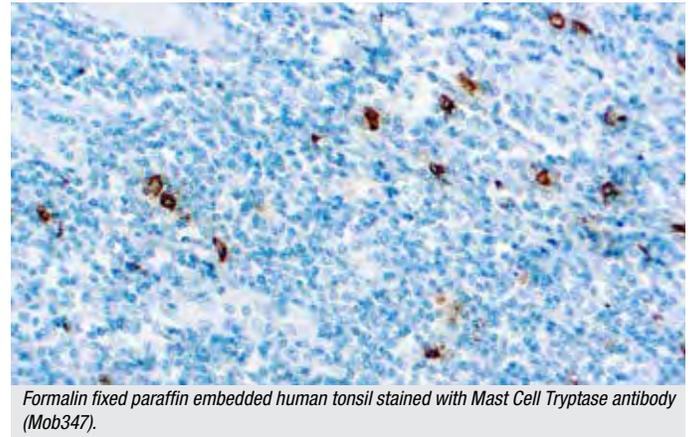
Formalin fixed paraffin embedded human breast carcinoma stained with Mammaglobin-A (PDM544).

**Immunogen:** Purified mammaglobin recombinant protein, containing amino acids 15-93.**Isotype:** IgG1, kappa**Positive Control:** Breast**Cellular Localization:** Cytoplasmic**Specificity:** Mammaglobin, a 93-amino acid glycoprotein, is encoded by a gene first identified in a study directed at the isolation of novel human breast cancer-associated genes (1). Mammaglobin expression is mostly, although not exclusively, confined to breast tissue, and anti-mammaglobin is a useful aid for the classification of carcinomas of breast origin.**MART-1****Clone:** A103**Catalog No.:** Mob277 Concentrated  
PDM153 Prediluted

Formalin fixed paraffin embedded human melanoma stained with MART-1 antibody (Mob277).

**Immunogen:** BALB/C mice were injected with recombinant MART-1 protein.**Isotype:** IgG1**Positive Control:** Melanoma**Cellular localization:** Cytoplasmic**Specificity:** This antibody is specific to a protein of 20 kDa known as MART-1 (melanoma antigen recognized by T cells-1) or Melan-A. This antibody does not cross-react with MAGE-1 or tyrosinase. MART-1 is a newly identified melanocyte differentiation antigen recognized by autologous cytotoxic T lymphocytes. This antibody stains melanomas and other tumors showing melanocytic differentiation.**Mast Cell Chymase****Clone:** CC1**Catalog No.:** Mob346 Concentrated  
PDM159 Prediluted

Formalin fixed paraffin embedded human tonsil stained with Mast Cell Chymase antibody (Mob346).

**Immunogen:** BALB/C mice were injected with a purified human skin chymase.**Isotype:** IgG1**Positive Control:** Tonsil**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. Mast cells contain a number of preformed chemicals mediators such as histamine, chymase, carboxypeptidase, and proteolytic tryptase. Human mast cell chymase is considered to be an important marker of mast cells and is an important mediator of inflammation.**Mast Cell Tryptase****Clone:** AA1**Catalog No.:** Mob347 Concentrated  
PDM160 Prediluted

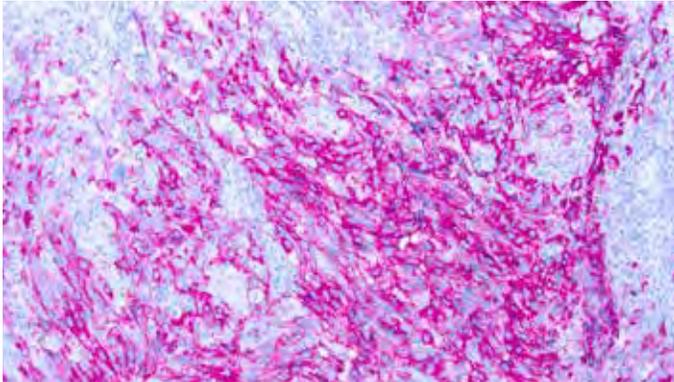
Formalin fixed paraffin embedded human tonsil stained with Mast Cell Tryptase antibody (Mob347).

**Immunogen:** BALB/C mice were injected with a purified human lung tryptase.**Isotype:** IgG1**Positive Control:** Tonsil**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with mast cells distributed in skin, synovium, lung, and heart. This antibody does not bind with any other cell type. Mast cells contain a number of preformed chemicals mediators such as histamine, chymase, carboxypeptidase, and proteolytic tryptase. Human mast cell tryptase is considered to be an important marker of mast cell activation and is an important mediator of inflammation.

## Melanoma

Clone: PNL2

Catalog No.: Mob421 Concentrated  
PDM213 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Melanoma antibody (Mob421).

**Immunogen:** Synthetic peptide.

**Isotype:** IgG1

**Positive Control:** Melanoma

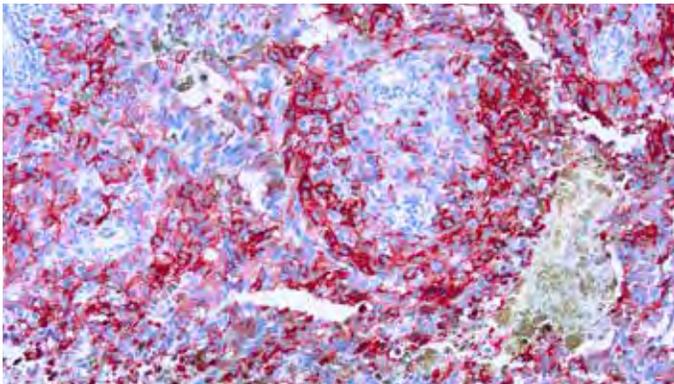
**Cellular Localization:** Cytoplasmic, membrane

**Specificity:** This antibody labels melanocytes and is a useful tool for the identification of melanomas and clear cell sarcomas. Anti-Melanoma, PNL2, seems to be a melanocyte antibody of autoimmune origin as it does not react with the non-melanocytic peptide antigen used for immunization.

## Melanoma (HMB45)

Clone: HMB45

Catalog No.: Mob079 Concentrated  
PDM011 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Melanoma antibody (Mob079).

**Immunogen:** BALB/C mice were injected with extract of pigmented melanoma metastases from lymph nodes.

**Isotype:** IgG1, kappa

**Positive Control:** Melanoma

**Cellular Localization:** Cytoplasm

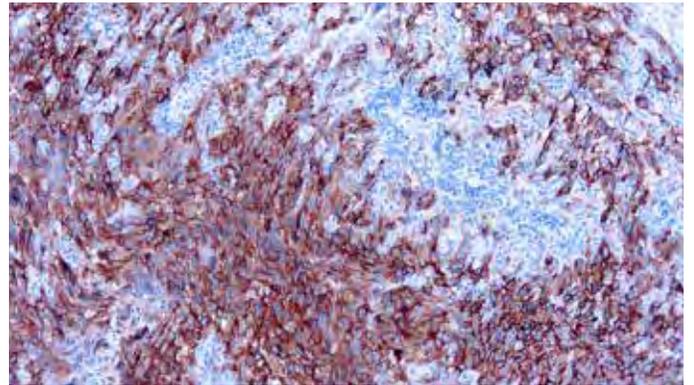
**Specificity:** This antibody reacts with a neuraminidase sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes. It reacts with junctional and blue nevus cells. Non-melanocytic cells are negative.

## Melanoma Cocktail

(HMB45 + Tyrosinase + MART-1)

Clone: HMB45 + T311 + A103

Catalog No.: Mob428 Concentrated  
PDM146 Prediluted



Formalin fixed paraffin embedded human melanoma stained with Melanoma Cocktail (PDM146).

**Immunogen:** Pigmented melanoma metastases from lymph nodes (HMB45) Recombinant human MART-1 protein (A103). Recombinant tyrosinase protein T311.

**Isotype:** HMB45 and A103, IgG1; T311, IgG2a

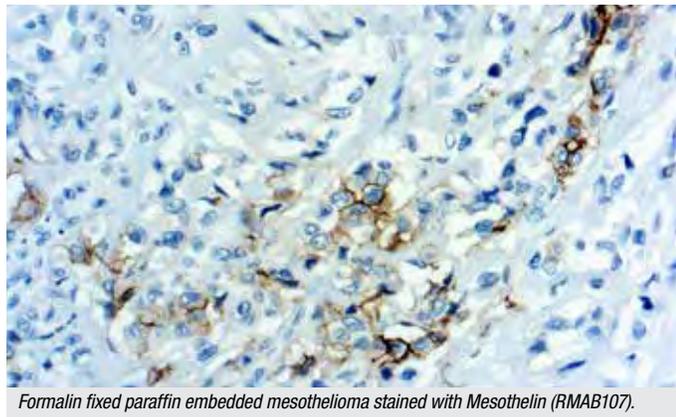
**Positive Control:** Metastatic melanoma in lymph node

**Cellular Localization:** Cytoplasmic

**Specificity:** The HMB45 clone reacts with a neuraminidase-sensitive oligosaccharide side chain of a glycoconjugate present in immature melanosomes. The HMB45-reactive antigen is present in cutaneous melanocytes, prenatal and infantile retinal pigment epithelium and melanoma cells and is thought to be oncofetal in nature. This antibody has been shown to label the majority of melanomas. Clone A103 recognizes a protein of 20 kDa, identified as MART-1 (melanoma antigen recognized by T cells-1) or Melan-A. Melan-A is a useful addition to melanoma panels as it is apparently specific for melanocytic lesions. Studies have also shown that MART-1 is more sensitive than HMB45 when labeling metastatic melanomas. Tyrosinase is a key enzyme involved in the initial stages of melanin biosynthesis. Studies have shown tyrosinase to be a more sensitive marker when compared to HMB45 and MART-1. It has been shown to label a higher percentage of desmoplastic melanomas than HMB45. The combination of HMB45, MART-1 and tyrosinase make this triple antibody cocktail a first-order pan melanoma screener.

**Mesothelin**

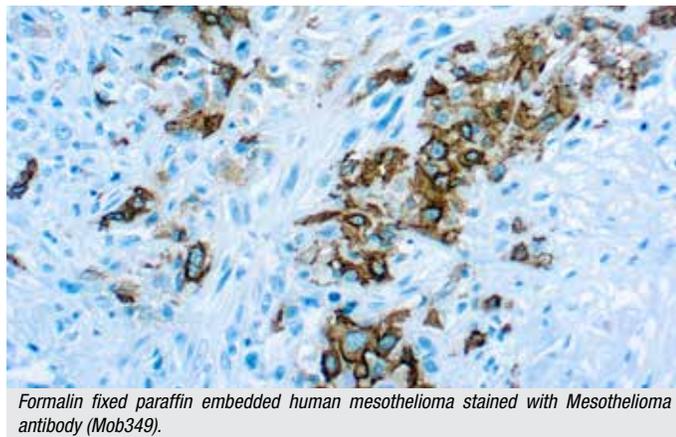
Clone: YP158

Catalog No.: **RMAB107 Concentrated**  
**RMPD107 Prediluted**

Formalin fixed paraffin embedded mesothelioma stained with Mesothelin (RMAB107).

**Immunogen:** Synthetic peptide corresponding to C-terminus of human mesothelin protein.**Isotype:** IgG**Positive Control:** Mesothelioma**Cellular Localization:** Cell membrane**Specificity:** Mesothelin is a glycosylphosphatidylinositol-linked cell-surface glycoprotein, which is present on the surface of normal mesothelium and is overexpressed in many patients with epithelial ovarian cancer and malignant mesotheliomas.**Mesothelioma**

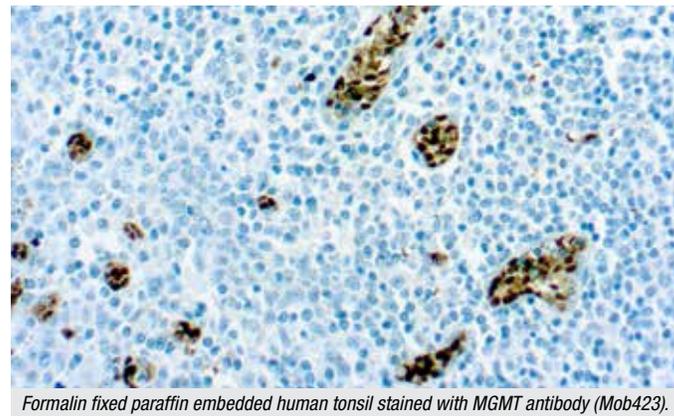
Clone: HBME-1

Catalog No.: **Mob349 Concentrated**  
**PDM134 Prediluted**

Formalin fixed paraffin embedded human mesothelioma stained with Mesothelioma antibody (Mob349).

**Immunogen:** BALB/C mice were injected with suspension of human mesothelioma cells from patients with malignant epithelial mesothelioma.**Isotype:** IgM**Positive Control:** Mesothelioma**Cellular Localization:** Cell membrane**Specificity:** This antibody reacts with an unknown antigen on microvilli of mesothelioma cells. It stains normal mesothelial cells as well as epithelial mesotheliomas in a thick membrane pattern due to abundant lung microvilli on the surface of these cells.**MGMT****(O(6)-Methylguanine-DNA-Methyltransferase)**

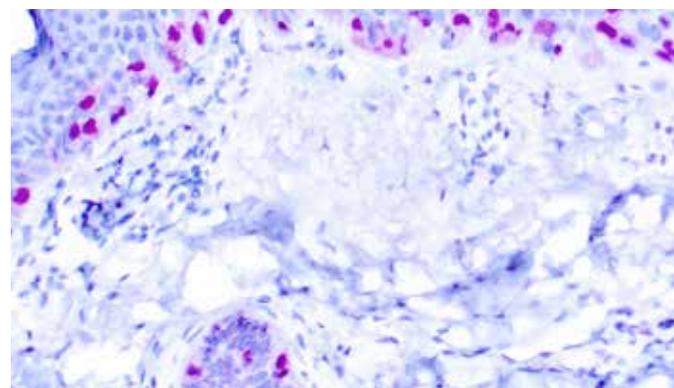
Clone: MT3.1

Catalog No.: **Mob423 Concentrated**  
**PDM423 Prediluted**

Formalin fixed paraffin embedded human tonsil stained with MGMT antibody (Mob423).

**Immunogen:** Recombinant human MGMT protein.**Isotype:** IgG1**Positive Control:** Tonsil**Cellular Localization:** Nuclear and cytoplasmic**Specificity:** O(6)-methylguanine-DNA-methyltransferase (MGMT) is a 22 kDa human DNA repair protein that removes O(6)-alkylguanine DNA adducts. MGMT acts as a suicide acceptor protein repairing the DNA by accepting alkyl groups and consequently inactivating itself. This antibody stains all mantle zone lymphocytes and 50% of germinal center lymphocytes. Basaloid epithelial cells of tonsil squamous mucosa are also stained positive with this antibody.**Microphthalmia Transcription Factor (MITF)**

Clone: D5

Catalog No.: **Mob462 Concentrated**  
**PDM168 Prediluted**

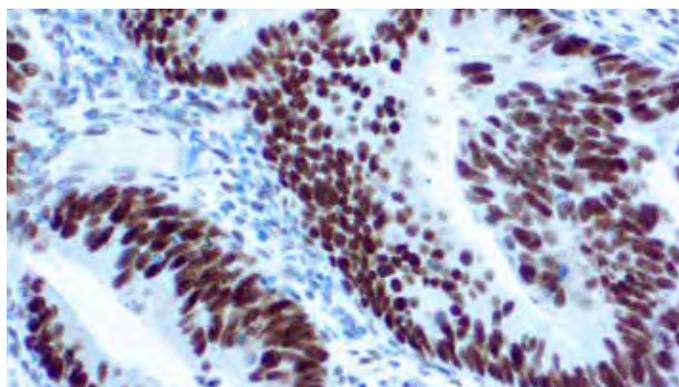
Formalin fixed paraffin embedded human skin stained with MITF antibody (Mob462).

**Immunogen:** BALB/C mice were injected with N-terminal fragment of human Mi protein.**Isotype:** IgG1**Positive Control:** Melanoma**Cellular Localization:** Nuclear**Specificity:** This antibody reacts with a 52-56 kDa protein known as microphthalmia (Mi). This antibody reacts with both melanocytic and non-melanocytic isoforms of Mi. Mi is a basic helix-loop-helix-leucine zipper (b-HLH-ZIP) transcription factor implicated in pigmentation, mast cells and bone development. There are two known isoforms of Mi differing by 66 amino acids at the amino terminus.

## MLH-1 (Mismatch Repair Protein)

Clone: G168-15

Catalog No.: Mob430 Concentrated  
PDM148 Prediluted



Formalin fixed paraffin embedded human colon carcinoma stained with MLH-1 antibody (Mob430).

**Immunogen:** Full length recombinant MLH.

**Isotype:** IgG1

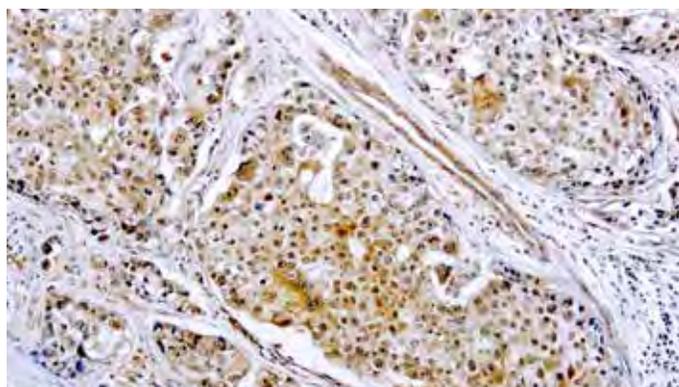
**Positive Control:** Tonsil, colon carcinoma

**Cellular Localization:** Nuclear

**Specificity:** The G168-15 antibody recognizes human and mouse MLH1 (80-85kDa). The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time. An alteration of microsatellite repeats is the result of slippage owing to strand misalignment during DNA replication and is referred to as microsatellite instability (MSI). These defects in DNA repair pathways have been related to human carcinogenesis. The importance of mismatch repair genes became apparent with the identification of the genetic basis for hereditary nonpolyposis colon cancer (HNPCC). MSH-2 is involved in the initial cognition of mismatch nucleotides during the replication mismatch repair process. It is thought that after MSH2 binds to a mismatched DNA duplex it is joined by a heterodimer of MLH1 and PMSH, which together help facilitate the later steps in mismatch repair.

## MMP-9

Catalog No.: RP066 Concentrated



Formalin fixed paraffin embedded human breast carcinoma stained with MMP-9 antibody (RP066).

**Immunogen:** A synthetic peptide from the middle region of human MMP-9.

**Positive Control:** Breast carcinoma

**Cellular Localization:** Cytoplasmic

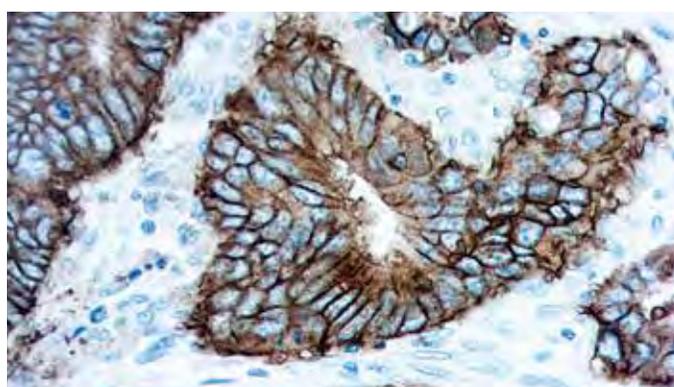
**Specificity:** This antibody reacts with a 92 kDa pro form and 86 kDa active form of MMP-9. MMPs are proteolytic enzymes capable of degrading connective tissue components. MMPs play a crucial role in tumor cell invasion and metastasis.

IVD only for markets outside the U.S. RUO for U.S. market.

## MOC-31

Clone: MOC-31

Catalog No.: Mob546 Concentrated  
PDM546 Prediluted



Formalin fixed paraffin embedded human colon carcinoma stained with MOC-31 (Mob546).

**Immunogen:** Epithelial antigen, EPG-2

**Positive Control:** Colon and Breast (Normal and Carcinoma)

**Isotype:** IgG1

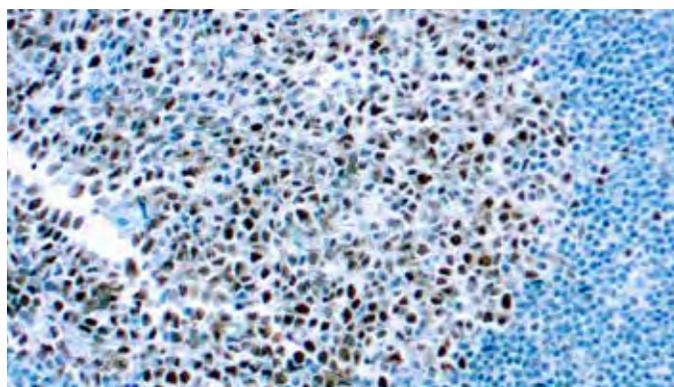
**Cell Localization:** Cytoplasmic

**Specificity:** MOC-31 antibody recognizes an epithelial-associated, glycoprotein located on the cell membrane surface and in the cytoplasm of virtually all epithelial cells. It is not present in most squamous epithelia, hepatocytes, renal proximal tubular cells, gastric parietal cells and myoepithelial cells. MOC-31 may be used in a panel of antibodies as a negative marker for mesothelioma, or lung adenocarcinoma. Studies have shown that MOC-31 is useful in differentiating tumors of unknown origin in liver cancers and distinguishing cholangiocarcinoma from hepatocellular carcinomas.

## MSH2

Clone: DBM15.82

Catalog No.: Mob585 Concentrated  
PDM585 Prediluted



Formalin fixed paraffin embedded human Tonsil stained with Mismatch Repair Protein 2 (MSH2) (Mob585).

**Immunogen:** BALB/C mice injected with recombinant human MSH2 protein.

**Isotype:** IgG1, kappa

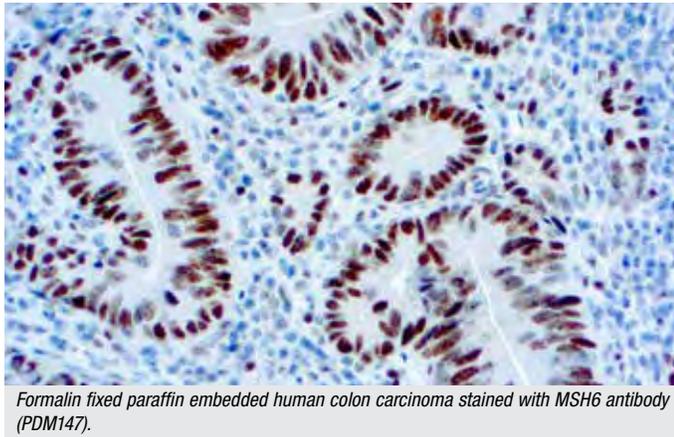
**Positive Control:** Tonsil

**Cellular Localization:** Nuclear

**Specificity:** This antibody reacts with a 102 kDa protein known as MSH2 (mismatch repair protein 2). MSH2 protein is involved in the initial recognition of mismatched nucleotides during the post replication mismatch repair process. Loss of MSH2 function leads to the accumulation of replication errors, which in turn may be responsible for the multiple mutations required for multistage carcinogenesis.

CONCENTRATED ANTIBODIES KEY: Mob = Mouse Monoclonal | RMAB = Rabbit Monoclonal | RP = Rabbit Polyclonal

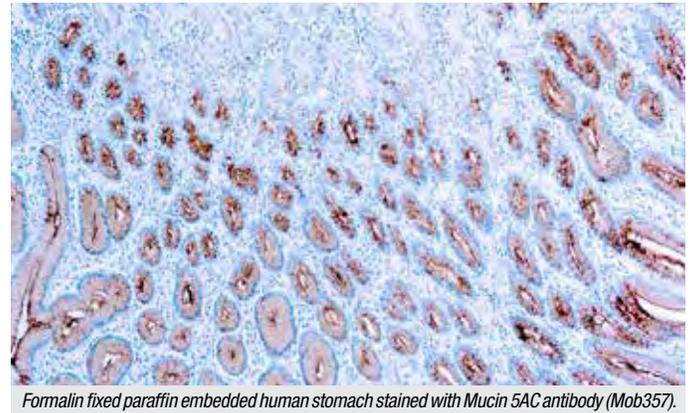
CONCENTRATED VOLUME KEY: MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**MSH6 (Mismatch Repair Protein)****Clone:** 44**Catalog No.:** Mob429 Concentrated  
PDM147 Prediluted

Formalin fixed paraffin embedded human colon carcinoma stained with MSH6 antibody (PDM147).

**Immunogen:** Human MSH6.**Isotype:** IgG1**Positive Control:** Tonsil, colon carcinoma**Cellular Localization:** Nuclear

**Specificity:** MSH6 is a heterodimer of MSH2 and binds to DNA containing G/T mismatches. The MSH2-MSH6 complex recognizes a single-base mispair insertion/deletion loop. An alteration of microsatellite repeats is the result of slippage owing to strand misalignment during DNA replication and is referred to as microsatellite instability (MSI). These defects in DNA repair pathways have been related to human carcinogenesis. Studies have shown the mutations of MLH-1, MSH2 and MSH6 genes contribute to the development of sporadic colorectal carcinoma. The repair of mismatch DNA is essential to maintaining the integrity of genetic information over time.

**Mucin 5AC/Gastric Mucin****Clone:** 45M1**Catalog No.:** Mob357 Concentrated  
PDM163 Prediluted

Formalin fixed paraffin embedded human stomach stained with Mucin 5AC antibody (Mob357).

**Immunogen:** BALB/C mice were injected with M1 mucin preparation from the fluid of an ovarian mucinous cyst belonging to an O Le (a-b) patient.

**Isotype:** IgG1, kappa**Positive Control:** Stomach**Cellular Localization:** Cytoplasmic, cell surface

**Specificity:** This antibody reacts with a 1000 kDa protein and recognizes the peptide core of gastric mucin M1. Mucins are high molecular weight glycoproteins with 80% carbohydrates and 20% core protein. Gastric mucin M1 antigen is found in columnar mucus cells of surface gastric epithelium and in goblet cells of the fetal and precancerous colon but not in normal colon. Resurgence of gastric mucin during colonic carcinogenesis is suggestive of either re-expression of the peptide core of gastric mucin in the adult colon or changes in the glycosylation pattern of mucin, which expose the hidden M1 antigen.

## Diagnostic BioSystems

is committed to enhancing immunohistochemistry test results at an affordable cost to support pathologists in making increasingly difficult diagnostic decisions. Our primary antibodies are well suited for both single-step and two-step polymer systems.

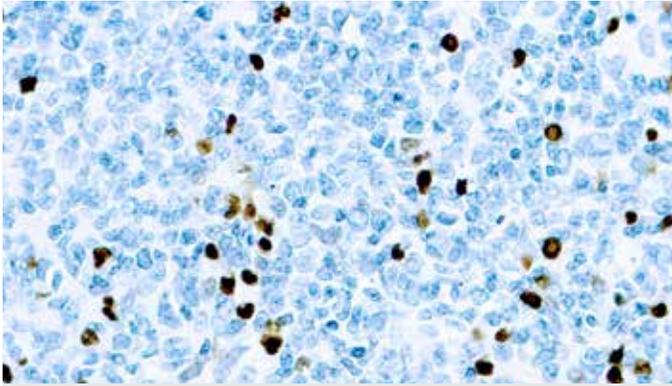
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## MUM1 Protein

Clone: MUM1P

Catalog No.: Mob420 Concentrated  
PDM420 Prediluted



Formalin fixed paraffin embedded human tonsil stained with MUM1 protein antibody (Mob420).

**Immunogen:** Recombinant GST-MUM1 protein.

**Isotype:** IgG1

**Positive Control:** Tonsil

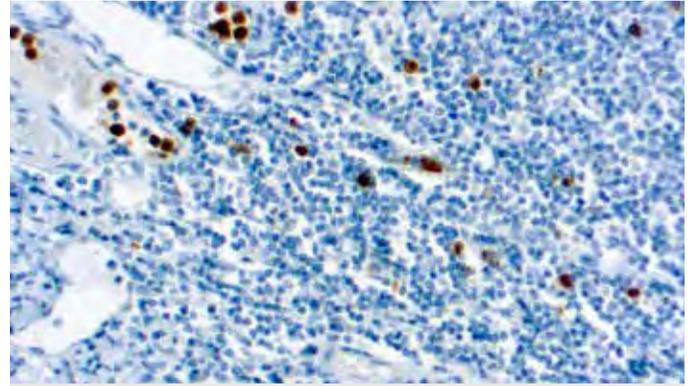
**Cellular Localization:** Nuclear and cytoplasmic

**Specificity:** Multiple myeloma oncogene-1 (MUM1) is a 50kDa protein encoded by the MUM1 gene. This antibody stains MUM1 protein, which is expressed in a subset of B cells in the light zone of the germinal center, plasma cells, activated T cells and a wide spectrum of related hematolymphoid neoplasms. This antibody is useful in the sub classification of lymphoid malignancies.

## Myeloperoxidase (MPO)

Clone: 59A5

Catalog No.: Mob551 Concentrated  
PDM551 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Myeloperoxidase antibody (Mob551).

**Immunogen:** Recombinant protein from exon 7 of the human myeloperoxidase.

**Isotype:** IgG2b, kappa

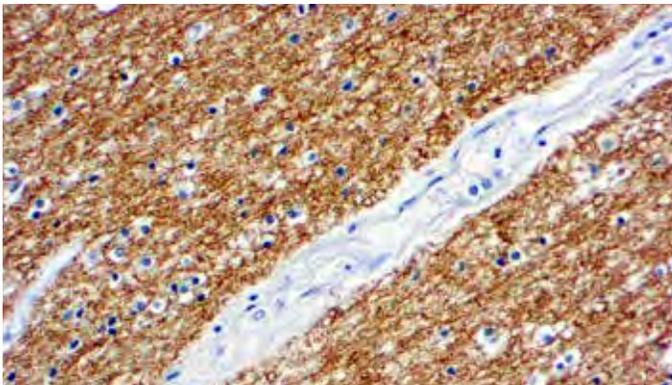
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** Myeloperoxidase metabolizes most of the hydrogen peroxide generated by activated phagocytes. This antibody stains strongly with the cytoplasm of myeloid cells. The antibody detects myeloperoxidase found in myeloid cells of acute myeloid leukemia. The myeloperoxidase gene has been localized to chromosome 17.

## Myelin Basic Protein (MBP)

Catalog No.: RP052 Concentrated



Formalin fixed paraffin embedded human medulla stained with Myelin Basic Protein antibody (RP052).

**Immunogen:** Human myelin basic protein isolated from normal human brain.

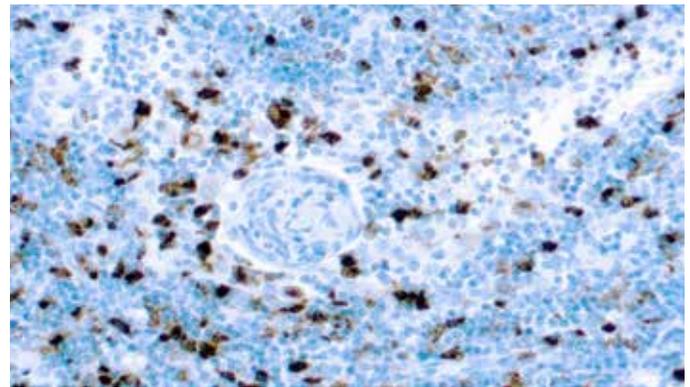
**Positive Control:** Brain

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human myelin basic protein and oligodendrocytes of white matter in brain and spinal cord. Grey matter stains weakly. This antibody stains peripheral nerves also.

## Myeloperoxidase (MPO)

Catalog No.: RP053 Concentrated  
PDR049 Prediluted



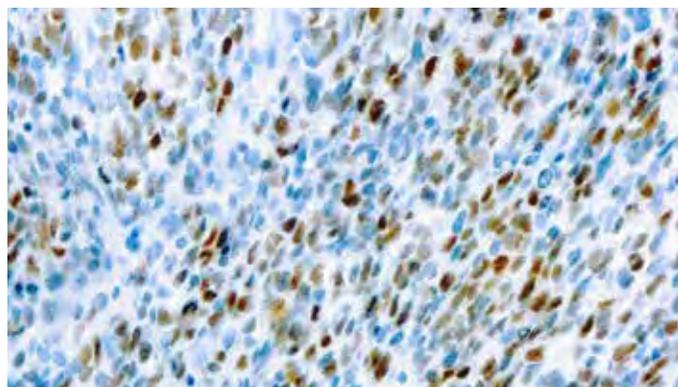
Formalin fixed paraffin embedded human lymphoma stained with Myeloperoxidase antibody (RP053).

**Immunogen:** Myeloperoxidase isolated from human granulocytes.

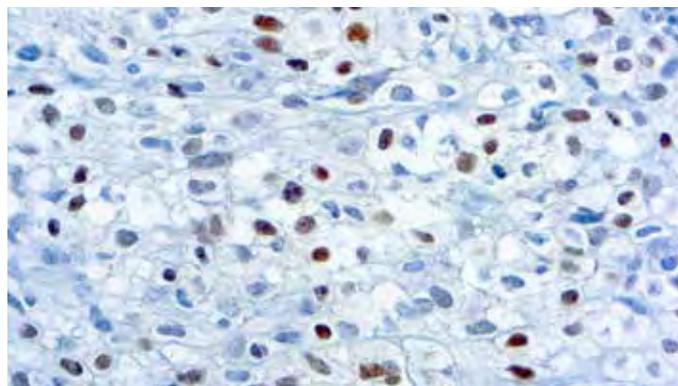
**Positive Control:** Tonsil

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human myeloperoxidase. It stains granules of neutrophils, granulocytes in spleen, bone marrow, tonsil and blood smears.

**MyoD1****Clone:** 5.2F**Catalog No.:** Mob278 Concentrated  
PDM120 Prediluted

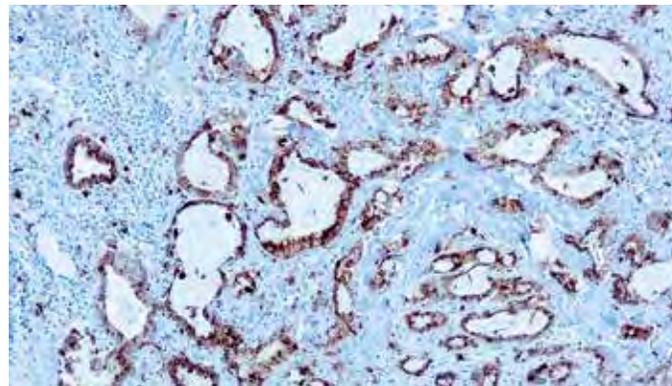
Formalin fixed paraffin embedded rhabdomyosarcoma stained with MyoD1 antibody (Mob278).

**Immunogen:** BALB/C mice were injected with a recombinant mouse MyoD1 protein.**Isotype:** IgG2a**Positive Control:** Rhabdomyosarcoma**Cellular Localization:** Nuclear**Specificity:** This antibody is specific to a 45 kDa protein, which is identified as MyoD1. This antibody is specific to an epitope of amino acid 3-56 in the N-terminus of mouse MyoD1. This antibody does not react with myogenin, Myf5 or Myf6. MyoD1 stains the nuclei of myoblasts in developing muscle tissues. MyoD1 is not detected in normal adult tissue but is expressed strongly in the tumor cell nuclei of rhabdomyosarcomas.**Myogenin****Clone:** F5D**Catalog No.:** Mob322 Concentrated  
PDM158 Prediluted

Formalin fixed paraffin embedded human rhabdomyosarcoma stained with Myogenin (PDM158).

**Immunogen:** BALB/C mice were injected with recombinant protein containing rat myogenin amino acid 30-224.**Isotype:** IgG1**Positive Control:** Rhabdomyosarcoma**Cellular Localization:** Nuclear**Specificity:** This antibody is specific to 34 kDa protein known as myogenin. Myogenin is a member of family of myogenic regulatory genes which includes MyoD, myf5 and MRF4. These genes encode a set of transcription factors which are essential for muscle development. Expression of myogenin is restricted to cells of skeletal muscle origin.**Myosin, Skeletal (Fast)****Clone:** MY32**Catalog No.:** Mob207 Concentrated  
PDM085 Prediluted

Formalin fixed paraffin embedded human skeletal muscle stained with Myosin antibody (Mob207).

**Immunogen:** Rabbit muscle myosin.**Isotype:** IgG1**Positive Control:** Skeletal muscle**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes heavy chain of human skeletal myosin. It does not stain cardiac or smooth muscle myosin. This antibody stains the fast twitch (type II) isomyosin molecule.**Napsin A****Clone:** KCG1.1**Catalog No.:** Mob463 Concentrated  
PDM154 Prediluted

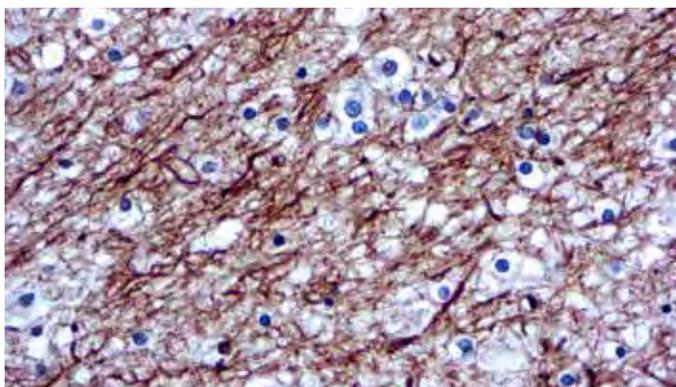
Formalin fixed paraffin embedded lung adenocarcinoma stained with Napsin A (PDM154).

**Immunogen:** BALB/C mice were injected with synthetic peptide from N terminus of human napsin A.**Isotype:** IgG1**Positive Control:** Lung adenocarcinoma**Cellular Localization:** Napsin is found in two isoforms, A and B, with highly homologous gene sequences. Napsin A has a molecular weight of 35.0 kDa and is also known as TA02. Napsin A is an aspartic proteinase which is expressed in the lung and involved in processing surfactant protein B (SP-B). It is also expressed in the kidney. This antibody may be a useful tool as a tumor marker for primary lung adenocarcinoma. Napsin expression correlates with the differentiation grade of lung adenocarcinoma.

## Neurofilament

**Clone:** 2F11

**Catalog No.:** Mob080 Concentrated  
PDM012 Prediluted



Formalin fixed paraffin embedded human brain stained with Neurofilaments antibody (PDM012).

**Immunogen:** BALB/C mice were injected with purified neurofilaments from human brain.

**Isotype:** IgG1, kappa

**Positive Control:** Brain

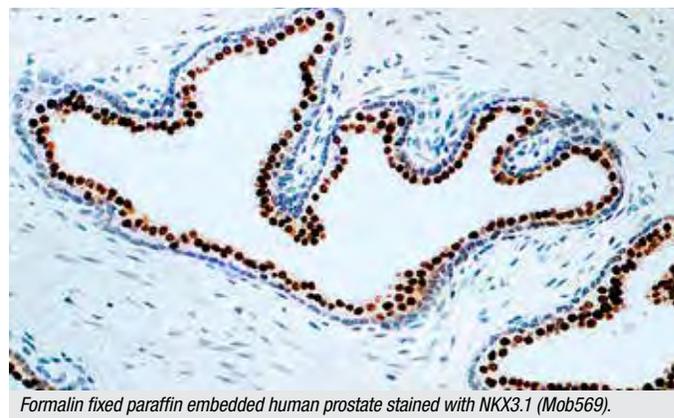
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with 70 and 200 kDa component of the neurofilament polypeptide subunit. It stains neurons, neuronal processes and peripheral nerves. This antibody reacts with some neuroblastomas and gangliomas but not with other non-neuronal tumors.

## NKX3.1

**Clone:** 361

**Catalog No.:** Mob569 Concentrated  
PDM569 Prediluted



Formalin fixed paraffin embedded human prostate stained with NKX3.1 (Mob569).

**Immunogen:** Recombinant His fusion protein corresponding to full length human NKX3-1.

**Isotype:** IgG1, kappa

**Positive Control:** Prostate cancer

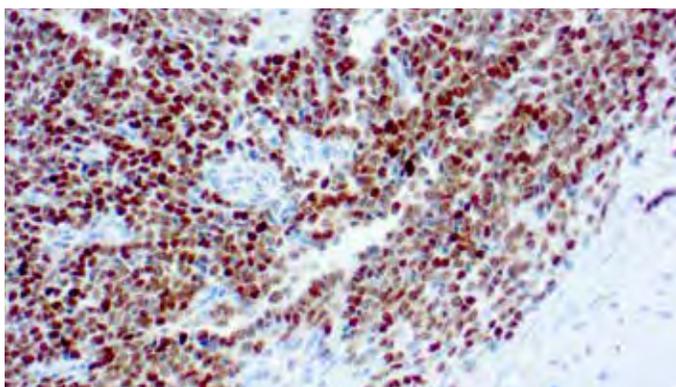
**Cellular Localization:** Nuclear

**Specificity:** The homeodomain-containing transcription factor NKX3-1 is a putative prostate tumor suppressor that is expressed in a largely prostate-specific and androgen-regulated manner. Loss of NKX3-1 protein expression is a common finding in human prostate carcinomas and prostatic intraepithelial neoplasia.

## NKX2.2

**Clone:** DBM15.15

**Catalog No.:** Mob486 Concentrated  
PDM199 Prediluted



Formalin fixed paraffin embedded human Ewing's sarcoma stained with NKX2.2 (Mob486).

**Immunogen:** Human full-length recombinant NKX2.2 protein.

**Isotype:** IgG2b, kappa

**Positive Control:** Ewing's sarcoma

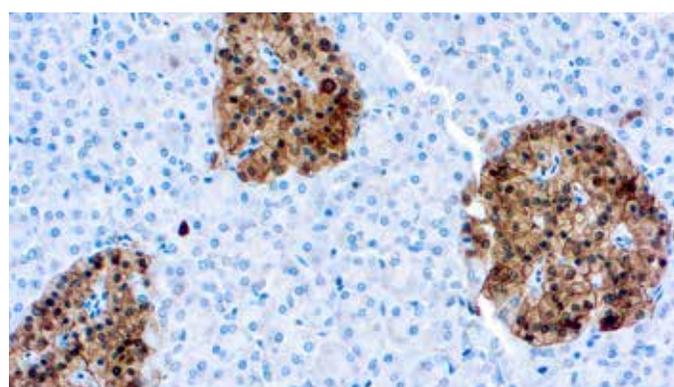
**Cellular Localization:** Nuclear

**Specificity:** Expression of NKX2.2 has been found in neuroendocrine tumors of the gut, making it a potential marker for the study of gastrointestinal neuroendocrine tumors. More recently, NKX2.2 protein was identified as a target of EWS-FLI-1, the fusion protein specific to Ewing sarcoma, and was shown to be differentially upregulated in Ewing sarcoma on the basis of array-based gene expression analysis. It acts as a valuable marker for Ewing sarcoma and aids in the differential diagnosis of small round cell tumors.

## NSE (Neuron Specific Enolase)

**Clone:** VI-H14

**Catalog No.:** Mob212 Concentrated  
PDM321 Prediluted



Formalin fixed paraffin embedded human pancreas stained with NSE antibody (Mob212).

**Immunogen:** BALB/C mice were injected with  $\gamma$ - $\gamma$  enolase from human brain.

**Isotype:** IgG1

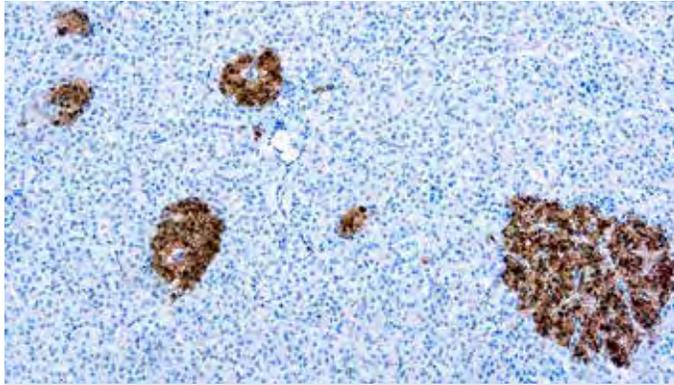
**Positive Control:** Pancreas

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to  $\gamma$ - $\gamma$  enolase isozyme of 46 kDa. This antibody stains neurons, neuroendocrine cells, gangliomas, oat cell carcinomas, astrocytomas, paragangliomas, glioblastomas, pheochromocytomas, melanomas and schwannomas.

**NSE (Neuron Specific Enolase)**

**Catalog No.:** RP054 Concentrated  
PDR006 Prediluted



Formalin fixed paraffin embedded human pancreas stained with NSE antibody (RP054).

**Immunogen:** Neuron specific enolase ( $\gamma$ - $\gamma$  isoenzyme) isolated from bovine brain.

**Positive Control:** Pancreas

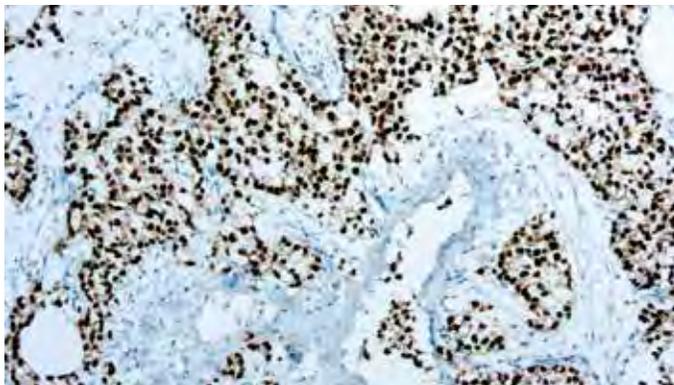
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with human isoenzymes of neuron specific enolase containing  $\gamma$  subunits. This antibody gives a specific staining in neurons of the brain, in islets of Langerhans in pancreas and in peripheral nerves of the skin. No staining with other tissue types has been seen.

**OCT-3/4**

**Clone:** NRG1.1

**Catalog No.:** Mob464 Concentrated  
PDM155 Prediluted



Formalin fixed paraffin embedded testes stained with OCT-3/4 antibody (Mob464).

**Immunogen:** BALB/C mice injected with synthetic peptide of human OCT-3/4 origin.

**Isotype:** IgG2b

**Positive Control:** Seminoma

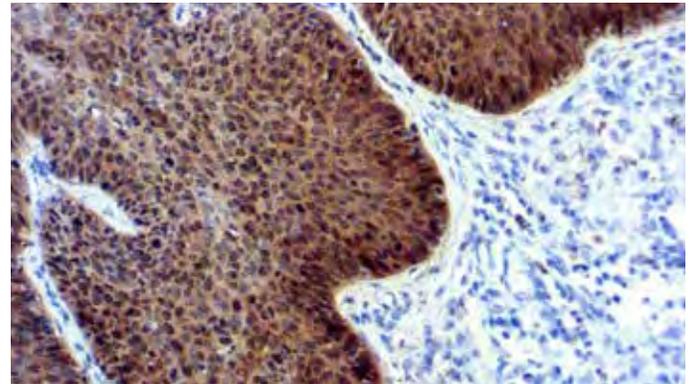
**Cellular Localization:** Nuclear

**Specificity:** OCT-3/4 (also known as POU5F1) is a transcription factor that has been recognized as fundamental in the maintenance of pluripotency in embryonic stem cells and primordial germ cells. It has been proposed as a useful marker for germ cell tumors (GCT) that exhibit features of pluripotentiality (seminoma/dysgerminoma, germinoma and embryonal carcinoma). OCT-3/4 immunostaining has been shown to be sensitive and specific for GCT, whether in primary gonadal or extragonadal sites or in metastatic lesions.

**p16**

**Clone:** JC2

**Catalog No.:** Mob575 Concentrated  
PDM575 Prediluted



Formalin fixed paraffin embedded HPV and cervical cancer stained with p16 (Mob575).

**Immunogen:** Purified recombinant prokaryotic full length human P16 INK4 protein.

**Isotype:** IgG2a

**Positive Control:** Cervical carcinoma

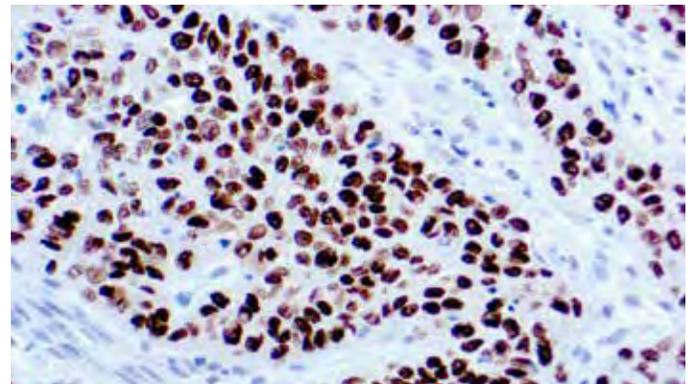
**Cellular Localization:** Nuclear and cytoplasmic

**Specificity:** P16 is a mitotic inhibitor protein. It competes with D-type cyclins to bind to cdk4 and cdk6. It acts as tumor suppressor and inhibits the progression of cells through the G1 phase of the cell cycle.

**p27Kip1**

**Clone:** DCS-72.F6

**Catalog No.:** Mob281 Concentrated  
PDM245 Prediluted



Formalin fixed paraffin embedded human colon carcinoma stained with p27Kip1 antibody (Mob281).

**Immunogen:** BALB/C mice were injected with mouse recombinant p27 protein.

**Isotype:** IgG1

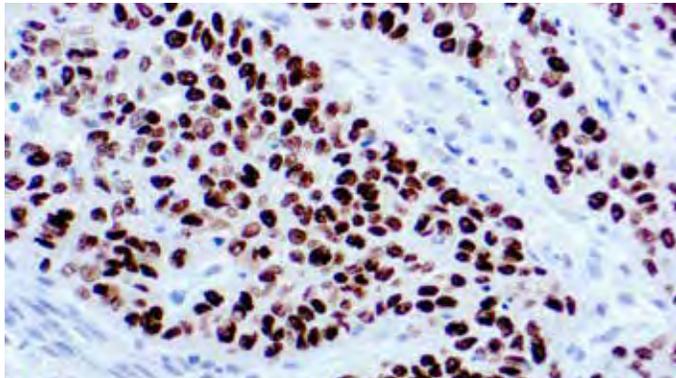
**Positive Control:** Colon carcinoma

**Cellular Localization:** Nuclear

**Specificity:** This antibody is specific to a protein of 27 kDa known as p27Kip1 a cell cycle regulatory mitotic inhibitor. This antibody recognizes an epitope between amino acids 83-204 of p27. This antibody does not show any cross-reactivity with other related mitotic inhibitors.

## p40

Catalog No.: **RP163 Concentrated**  
**PDR055 Prediluted**



Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with p40 antibody (PDR055).

**Immunogen:** A synthetic peptide corresponding to amino acids 5-17 of human p40.

**Positive Control:** Prostate

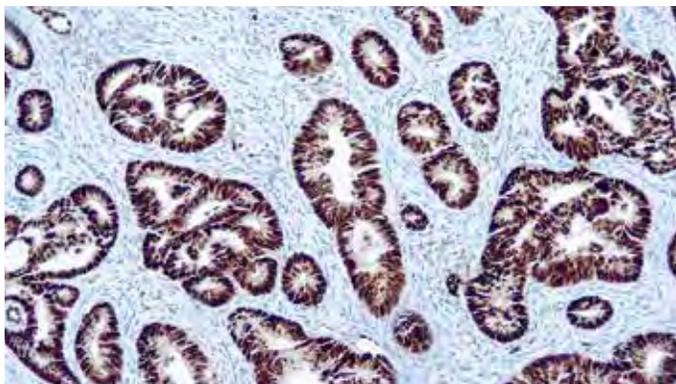
**Cellular Localization:** Nuclear

**Specificity:** p40 is a relatively unknown antibody that recognizes ΔNp63-a p63 isoform suggested to be highly specific for squamous/basal cells. In a recent study, p40 is equivalent to p63 in sensitivity for squamous cell carcinoma, but it is markedly superior to p63 in specificity<sup>1</sup>, which eliminates a potential pitfall of misinterpreting a p63-positive adenocarcinoma or unsuspected lymphoma as squamous cell carcinoma. These findings strongly support the routine use of p40 in place of p63 for the diagnosis of pulmonary squamous cell carcinoma.

## p53

Clone: **D0-7**

Catalog No.: **Mob082 Concentrated**  
**PDM013 Prediluted**



Formalin fixed paraffin embedded colon carcinoma stained with p53 antibody (Mob082).

**Immunogen:** Recombinant human wild type P53 protein expressed in *E. coli*.

**Isotype:** IgG2b, kappa

**Positive Control:** Breast carcinoma

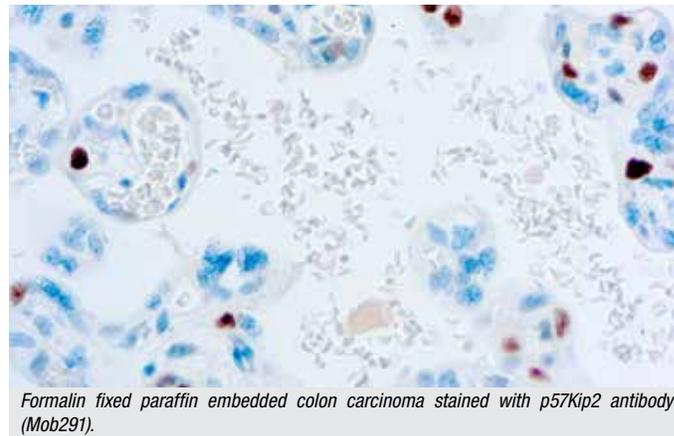
**Cellular Localization:** Nuclear

**Specificity:** This antibody reacts with wild as well as mutant types of P53 protein. It recognizes an epitope in the N-terminus of p53 protein, known to reside between amino acids 35 to 45. This antibody can be demonstrated in 22-76% of the colon, stomach, bladder, breast, lung and testes cancers.

## p57Kip2

Clone: **57P06**

Catalog No.: **Mob291 Concentrated**  
**PDM205 Prediluted**



Formalin fixed paraffin embedded colon carcinoma stained with p57Kip2 antibody (Mob291).

**Immunogen:** BALB/C mice were injected with mouse recombinant p57Kip2 protein.

**Isotype:** IgG2b, kappa

**Positive Control:** Colon carcinoma

**Cellular Localization:** Nuclear

**Specificity:** This antibody is specific to a protein of 57 kDa known as p57Kip2 a cell cycle regulatory mitotic inhibitor. This antibody does not cross-react with p27Kip1. p57Kip2 is a potent tight-binding inhibitor of several G1 cyclin complexes and a negative regulator of cell proliferation.

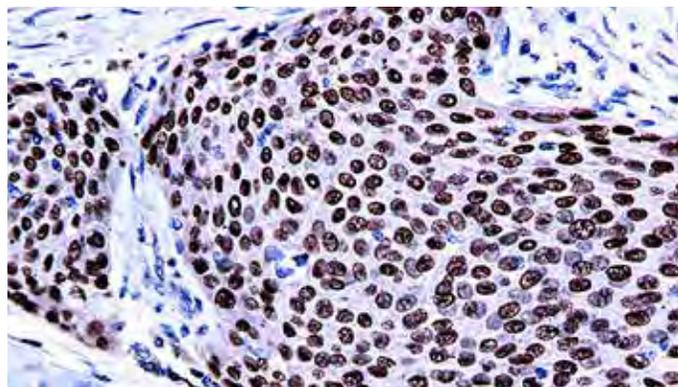


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**p63**

Clone: DBR16.1

Catalog No.: RMAB086R Concentrated  
RMPD086R Prediluted

Formalin fixed paraffin embedded human lung squamous cell carcinoma stained with p63 antibody (RMAB086R)

**Immunogen:** Recombinant human p63 protein fragment.

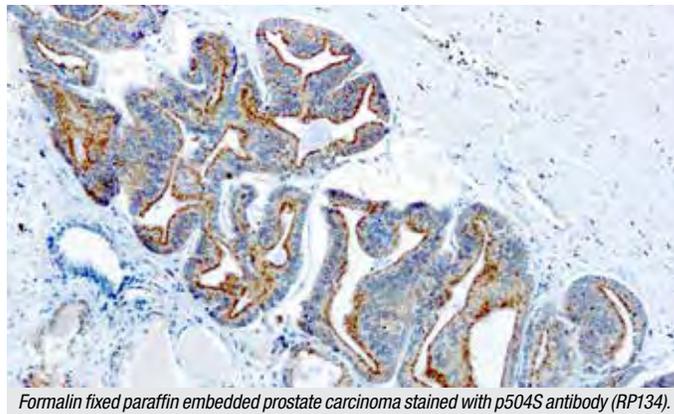
**Isotype:** IgG

**Positive Control:** Prostate Ca, Tonsil, Breast

**Cellular Localization:** Nuclear

**Specificity:** p63 is a homolog of the tumor suppressor p53, it is identified in basal cells in the epithelial layers of a variety of tissues, including epidermis, cervix, urothelium, breast and prostate. p63, vital for the development of the prostate and selectively expressed by normal prostate basal cells, has been shown to be a promising complementary basal cell specific marker to High Molecular Weight-Cytokeratin (HMW-CK), for the differential diagnosis of benign prostatic lesions and prostatic carcinoma. p63 has also been shown to be a sensitive marker for lung squamous cell carcinomas (SqCC), with a sensitivity of ~90%. Specificity for lung SqCC, vs. lung adenocarcinoma (LADC), is approximately 80. In breast tissue, p63 has been identified in myoepithelial cells of normal ducts.

*RUO for all markets*

**p504S/ $\alpha$ -Methylacyl-CoA Racemase (AMACR)**Catalog No.: RP134 Concentrated  
PDR046 Prediluted

Formalin fixed paraffin embedded prostate carcinoma stained with p504S antibody (RP134).

**Immunogen:** A synthetic human AMACR peptide.

**Positive Control:** Prostate carcinoma

**Cellular Localization:** Cytoplasmic

**Specificity:** P504S has been recently described as a prostate cancer-specific gene that encodes a protein involved in the  $\beta$ -oxidation of branched chain fatty acids. Expression of p504S protein is found in prostatic adenocarcinoma but not in benign prostatic tissue. It stains premalignant lesions of prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. P504S can be used as a positive marker for PIN.

*IVD only for markets outside the U.S. RUO for U.S. market.*

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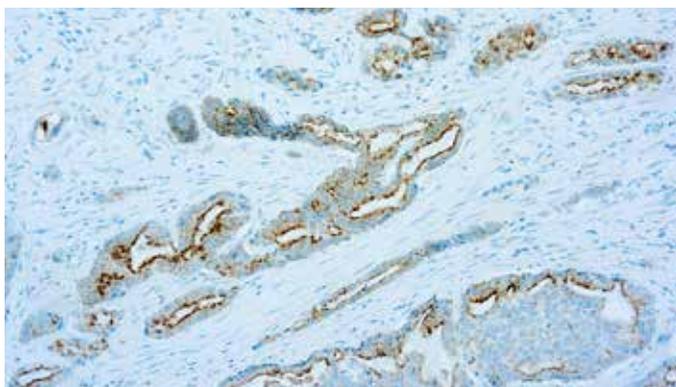
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## p504s

Clone: 13H4

Catalog No.: **RMAB078 Concentrated**  
**RMPD078 Prediluted**



Formalin fixed paraffin embedded human prostate carcinoma stained with p504s (RMAB078).

**Immunogen:** Human AMACR (P504S) polypeptide.

**Isotype:** Rabbit IgG

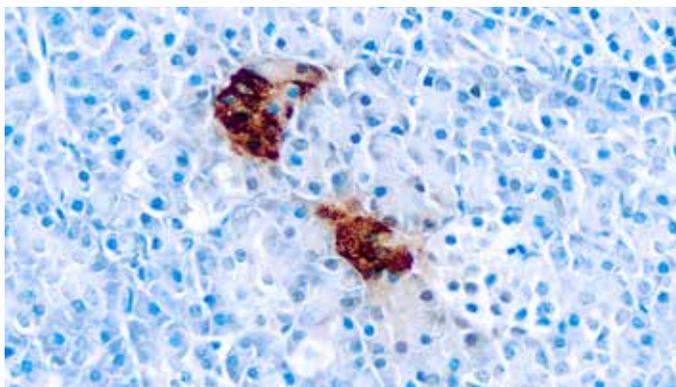
**Positive Control:** Prostate carcinoma

**Cellular Localization:** Cytoplasmic

**Specificity:** P504S (AMACR) is an essential enzyme in the  $\beta$ -oxidation of branched-chain fatty acids. Recently, P504S was identified through cDNA library subtraction and microarrays in malignant prostate tissues. High expression of P504S protein is found in prostatic adenocarcinoma but not in benign prostatic tissue by immunohistochemical staining in paraffin-embedded tissues. The expression of P504S is also detected in two premalignant lesions of the prostate: high-grade prostatic intraepithelial neoplasia (PIN) and atypical adenomatous hyperplasia. Using P504S as a positive marker along with basal cell staining (34  $\beta$ E12 or P63) as a negative marker could help to confirm the diagnosis of small focus of prostate carcinoma on needle biopsy.

## Pancreatic Polypeptide

Catalog No.: **RP030 Concentrated**



Formalin fixed paraffin embedded human pancreas stained with Pancreatic Polypeptide antibody (RP030).

**Immunogen:** Synthetic human pancreatic polypeptide conjugated to keyhole limpet hemocyanin.

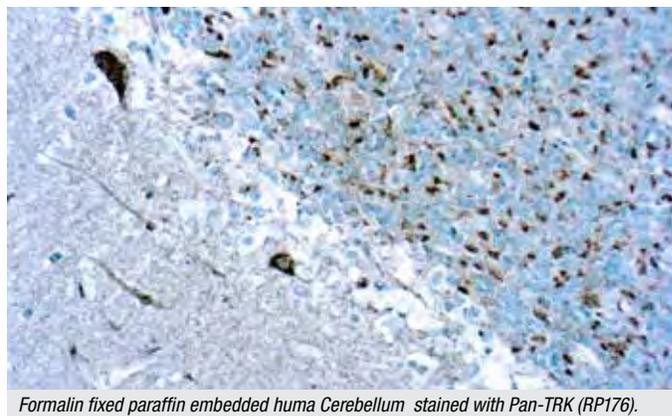
**Positive Control:** Pancreas

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with pancreatic polypeptide. It stains the periphery of islets, exocrine pancreatic parenchyma and the epithelium of small and medium sized ducts and acinar cells.

## Pan-TRK

Catalog No.: **RP176 Concentrated**  
**PDR176 Prediluted**



Formalin fixed paraffin embedded human cerebellum stained with Pan-TRK (RP176).

**Immunogen:** Peptide-KLH conjugate with human Trk A (777-796aa).

**Positive Control:** Cerebral cortex tissue

**Cellular Localization:** Cytoplasm

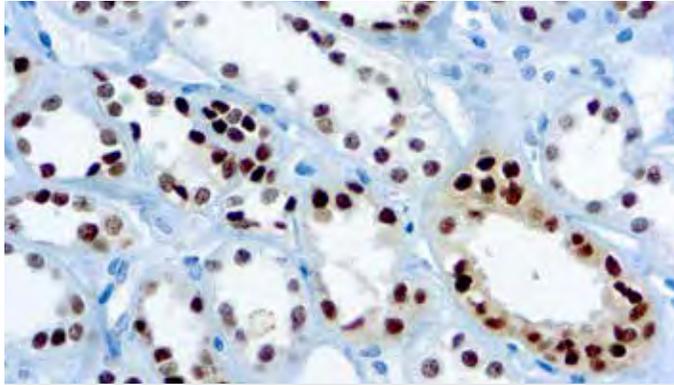
**Specificity:** Neurotrophic tyrosine kinase receptor (NTRK) is a family of 3 proto-oncogenes including NTRK1, NTRK2, and NTRK3 which encode Trk A, Trk B, and Trk C proteins, respectively. The latter are involved in biological processes such as neuronal survival, differentiation, and plasticity under physiological circumstances. In various cancers, oncogenic fusions involving the kinase domain of NTRK1, 2, or 3 are present. Pan-Trk IHC is a time- and tissue-efficient screen for NTRK fusions, particularly in driver-negative advanced malignancies and potential cases of secretory carcinoma and congenital fibrosarcoma. Pan-Trk IHC can help determine whether translation occurs for novel NTRK rearrangements.



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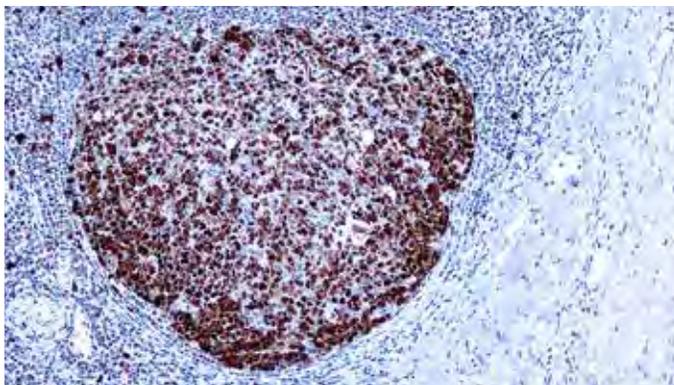
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**PAX-8****Clone:** 4H7B3**Catalog No.:** PDM180 Prediluted

Formalin fixed paraffin embedded renal cell carcinoma stained with Pax-8 antibody (PDM180).

**Immunogen:** ag0306.**Isotype:** IgG1**Positive Control:** Normal kidney, renal cell, or serous ovarian carcinomas**Cellular Localization:** Nuclear

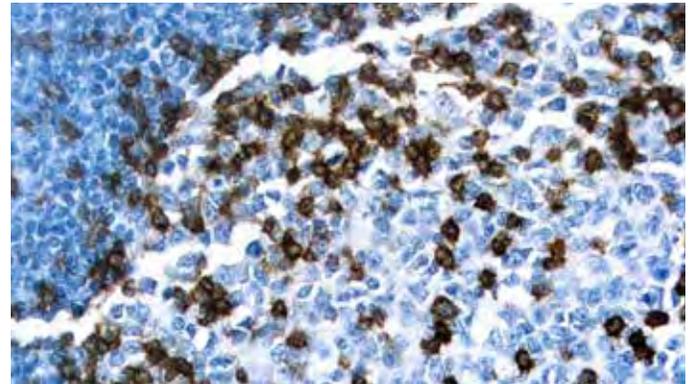
**Specificity:** PAX-8 is expressed in a high percentage of renal cell carcinomas and ovarian cancers. This mouse monoclonal PAX-8 antibody has been designed to target restricted epitopes, and exhibits higher specificity and provides sharper staining than the PAX-8 rabbit polyclonal antibody. Unlike the polyclonal PAX-8, this mouse monoclonal antibody does not stain B-cells, and does not recognize epitopes of pancreatic origin and neuroendocrine cells in stomach and colon; thus providing superior specificity. The expression of the mouse monoclonal PAX-8 targets antigens found in normal kidney, thyroid and cervix, but not normal ovary. PAX-8 stains nuclei exclusively and performs well in formalin-fixed paraffin-embedded tissues.

**PCNA (Proliferating Cell Nuclear Antigen)****Clone:** PC10**Catalog No.:** Mob083 Concentrated  
PDM014 Prediluted

Formalin fixed paraffin embedded human tonsil stained with PCNA antibody (Mob083).

**Immunogen:** Rat PCNA made in the protein A expression vector pR1T2T.**Isotype:** IgG2a, kappa**Positive Control:** Tonsil**Cellular Localization:** Nuclear

**Specificity:** PCNA is essential for cellular DNA synthesis. This antibody reacts with proliferating cells in a wide range of normal tissues. The significance of PCNA immunoreactivity in tumors is not fully established. However, in non-Hodgkin lymphoma a linear relation between Ki-67 and PCNA staining has been demonstrated.

**PD-1****Clone:** EH33**Catalog No.:** Mob573 Concentrated  
PDM573 Prediluted

Formalin fixed paraffin embedded human tonsil stained with PD-1 (Mob573).

**Immunogen:** Recombinant protein fragment corresponding to the extracellular domain of human PD-1 (as an Ig fusion protein).**Isotype:** IgG2a, kappa**Positive Control:** Tonsil**Cellular Localization:** Membrane

**Specificity:** PD-1 antibody aids in pathways that can protect tumors from cytotoxic T cells, ultimately inhibiting the antitumor immune response by deactivating cytotoxic T cells in the tumor microenvironment and preventing priming and activation of new T cells in the lymph nodes and subsequent recruitment to the tumor. PD-L1 binds to T-cell receptors B7.1 and PD-1, deactivating cytotoxic microenvironment. The PD-1 antibody has recently been used as a tool for predictive biomarkers in the diagnosis of various cancers. The PD-L1/B7.1 and PD-L1/PD-1 pathway, once deactivated, allow T cells to remain inhibited.

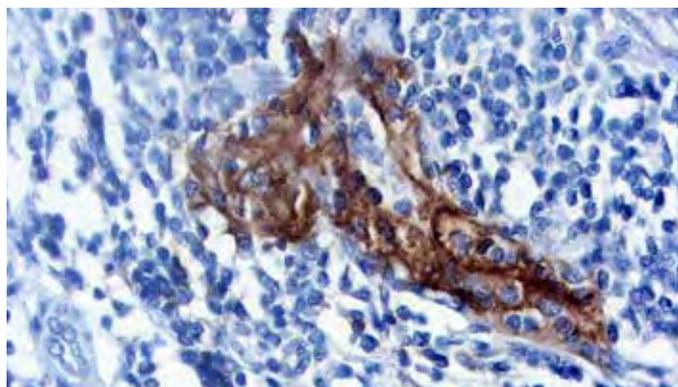
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## PD-L1

Clone: 405-9A11

Catalog No.: Mob572 Concentrated  
PDM572 Prediluted



Formalin fixed paraffin embedded squamous lung carcinoma stained with PD-L1 (Mob572).

**Immunogen:** Last 19 amino acids at the carboxy-terminus of the human membrane-bound PD-L1 polypeptide, coupled to KLH.

**Isotype:** IgG1, kappa

**Positive Control:** Lung squamous cell carcinoma

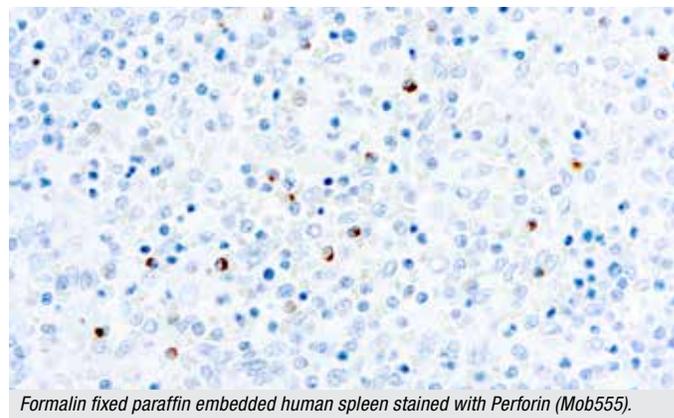
**Cellular Localization:** Membrane

**Specificity:** The programmed death receptor 1 (PD-1) protein is a cell-surface receptor on certain lymphocytes that, with its ligand programmed death ligand 1 (PD-L1), helps to down-regulate immune responses. Many cancer types express PD-L1 and evade immune recognition via the PD-1/PD-L1 interaction. Precision therapies targeting the PD-1/PD-L1 pathway have the potential to improve response and thereby offer a novel treatment avenue to some patients with cancer.

## Perforin

Clone: 5B10

Catalog No.: Mob555 Concentrated



Formalin fixed paraffin embedded human spleen stained with Perforin (Mob555).

**Immunogen:** Recombinant protein corresponding to an external region of the C-terminus of the perforin molecule.

**Isotype:** IgG1

**Positive Control:** Spleen

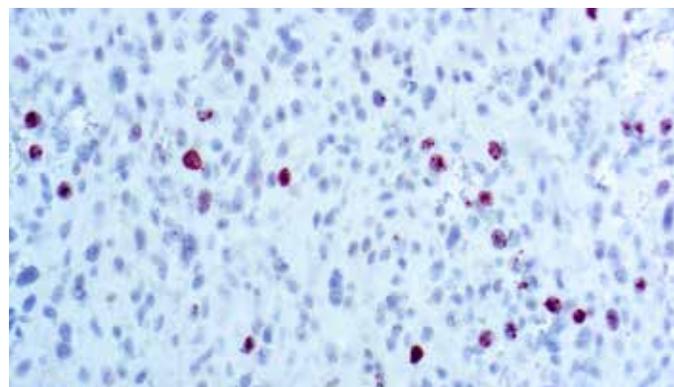
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to a 70 kDa protein, which is a potent cytolytic pore-forming protein. Perforin is a specific marker of functionally active cytotoxic T-lymphocytes and natural killer cells. Perforin mediates cytolysis of target cells by membrane damage and apoptosis.

## pHH3

Catalog No.: RP168 Concentrated

PDR168 Prediluted



Formalin fixed paraffin embedded Melanoma stained with pHH3 (RP168).

**Immunogen:** Phosphohistone protein isolated from human tissue.

**Positive Control:** Melanoma

**Cellular Localization:** Nuclear (mitotic figure)

**Specificity:** pHH3 can serve as a mitotic marker to separate mitotic figures from apoptotic bodies and karyorrhectic debris, which may be a very useful tool in diagnosis of tumor grades, especially in CNS, skin, gyn., soft tissue, and GIST.



**PIN5 Cocktail**

Rabbit anti-p40 + Mouse anti-Cytokeratin (HMW) and Rabbit anti-p504S (AMACR)

Clone: Mouse anti Cytokeratin H.M.W Clone:34βE12

Catalog No.: PDR057 Prediluted



Formalin fixed paraffin embedded human prostate carcinoma stained with Prostate Cocktail (PDR057).

**Positive Control:** Prostatic intraepithelial neoplasia (PIN).

**Cellular Localization:** p40: Nuclear Cytokeratin (HMW): Cytoplasmic P504S (AMACR): Cytoplasmic

**Specificity:** The combined detection of p504S, p40 and high molecular weight cytokeratin markers has been shown to be useful for distinguishing benign conditions mimicking cancer from prostate carcinomas. In particular, these markers have been shown to be relevant in diagnosing the premalignant condition, prostatic intraepithelial neoplasia (PIN).

High molecular weight cytokeratin and p63 are commonly used markers of basal epithelial cells. Benign prostate tissue contains basal cells, which are absent in prostate cancers. As p40 is an isoform of p63, it also stains basal epithelial cells and can be used in prostate cancer tissue.

P504S has been recently described as a prostate cancer-specific gene. Expression of p504S (AMACR) protein is seen in prostatic adenocarcinoma but not in benign prostatic tissue. Anti-p504S stains premalignant lesions of prostate: high-grade PIN and atypical adenomatous hyperplasia.

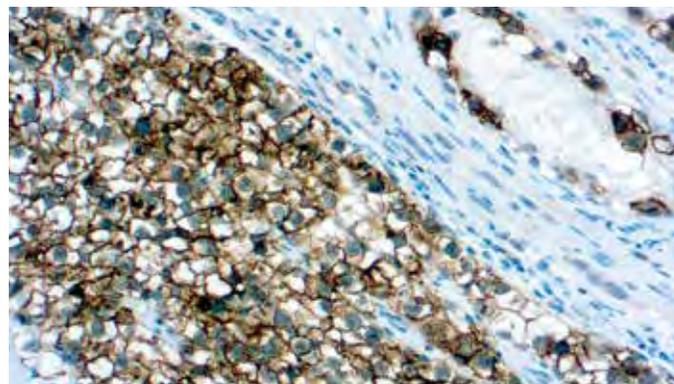
The PIN5 antibody combination may be particularly useful for confirming the diagnosis of prostate carcinoma in small foci of needle biopsies. The positive prostate cancer marker, p504S (AMACR), in conjunction with the negative basal cell markers (p40 and H.M.W cytokeratin) offers utility in diagnosing PIN in difficult cases where tissue may be limited

IVD only for markets outside the U.S. RUO for U.S. market.

**Placental Alkaline Phosphatase (PLAP) (SP15)**

Clone: SP15

Catalog No.: RMAB017 Concentrated  
RMPD017 Prediluted



Formalin fixed paraffin embedded Seminoma stained with Placental Alkaline Phosphatase (PLAP) (SP15) (RMAB017).

**Immunogen:** Recombinant protein encoding human placental alkaline phosphatase (PLAP).

**Isotype:** Rabbit IgG

**Positive Control:** Placenta

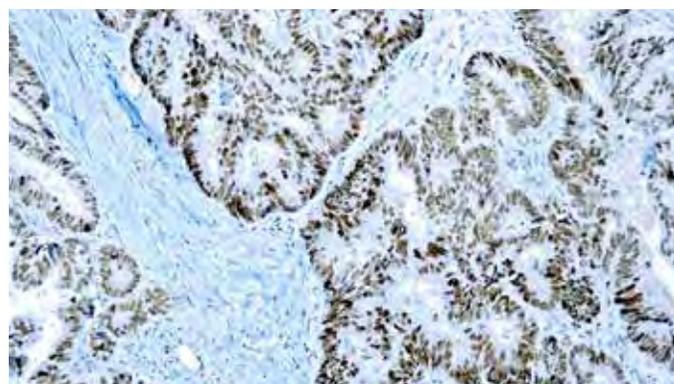
**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with a membrane-bound isoenzyme (Regan and Nagao type) of placental alkaline phosphatase (PLAP) occurring in the placenta during the 3rd trimester of gestation. This antibody is highly specific to PLAP and shows no cross-reaction with other isoenzymes of alkaline phosphatases. It is useful in the identification of testicular germ cell tumors. Unlike germ cell tumors, PLAP-positive somatic cell tumors uniformly express epithelial membrane antigen (EMA).

**PMS2 (Mismatch Repair Protein)**

Clone: A16-4

Catalog No.: PDM171 Prediluted



Formalin fixed paraffin embedded colon adenocarcinoma stained with PMS2 (PDM171).

**Immunogen:** Recombinant human PMS2 (C-terminus).

**Isotype:** IgG1, κ

**Positive Control:** Colon carcinoma, tonsil

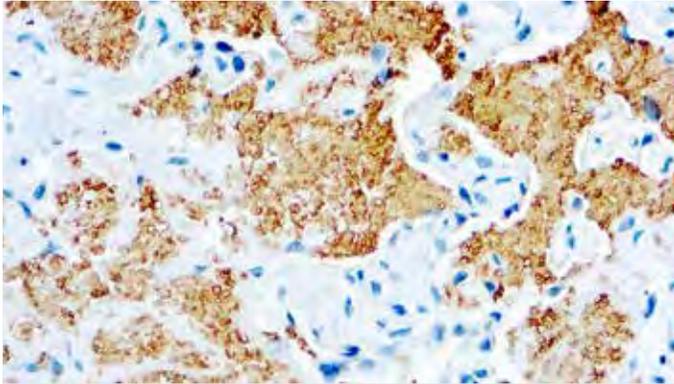
**Cellular Localization:** Nuclear

**Specificity:** Postmeiotic segregation increased 2 or PMS2 was originally discovered in *S. cerevisiae* and is part of the mismatch repair system. It resides on 7p22.2 and its gene product partners with MLH1 to help detect mismatches in DNA. Mutations in PMS2 have been reported in about two percent of families with Lynch syndrome (hereditary nonpolyposis colorectal cancer).

## Pneumocystis carinii

Clone: 3F6

Catalog No.: Mob091 Concentrated  
PDM584 Prediluted



Formalin fixed paraffin embedded human infected tissue stained with *Pneumocystis carinii* antibody (Mob091).

**Immunogen:** BALB/C mice were injected with *P. carinii* cysts isolated from human lung.

**Isotype:** IgM, kappa

**Positive Control:** Infected lung

**Cellular Localization:** Alveolar spaces

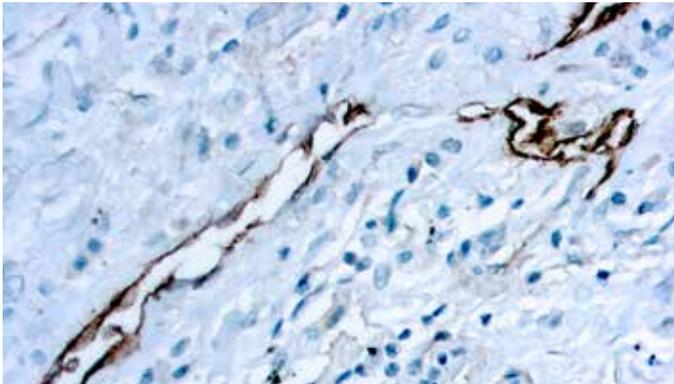
**Specificity:** This antibody reacts with *P. carinii* in the fixed human tissues. The antibody is specific against an 82 kDa parasite specific polypeptide. It does not cross-react with *G. lamblia*, *T. gondii*, *T. cruzi*, *L. tropica*, *E. histolytica*, *C. albicans* and *P. falciparum*.

IVD only for markets outside the U.S. RUO for U.S. market.

## Podoplanin/D2-40

Clone: D2-40

Catalog No.: Mob558 Concentrated  
PDM558 Prediluted



Formalin fixed paraffin embedded human lung carcinoma stained with Podoplanin (PDM545).

**Immunogen:** Dysgerminoma tissue.

**Isotype:** IgG1, kappa

**Positive Control:** Tonsil

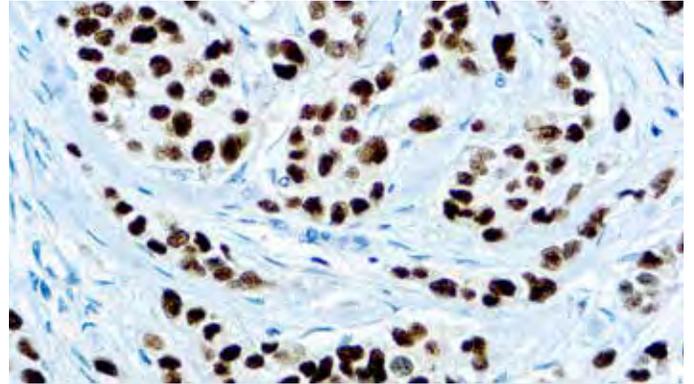
**Cellular Localization:** Transmembrane and Cytoplasmic

**Specificity:** Podoplanin identifies the ~38 kDa O-linked transmembrane sialoglycoprotein podoplanin, which is expressed in the endothelium of lymphatic capillaries, but not in the blood vasculature (1). Besides the expression in lymphatic endothelium, podoplanin is also found in a variety of other tissues, including mesothelial cells, reticular cells, follicular dendritic cells, ovarian and testicular germ cells (2). Results aid in the classification of lymphatic invasion of primary tumors.

## PR (Progesterone Receptor)

Clone: SP2

Catalog No.: RMAB002 Concentrated  
RMPD002 Prediluted



Formalin fixed paraffin embedded breast carcinoma stained with Progesterone Receptor antibody (RMAB002).

**Immunogen:** Recombinant protein encoding human progesterone receptor 412-526 aa.

**Isotype:** IgG

**Positive Control:** Breast Carcinoma

**Cellular Localization:** Nuclear

**Specificity:** The progesterone receptor (PgR) is an estrogen-regulated protein. It has been proposed that expression of PgR indicates a responsive estrogen receptor (ER) pathway. A number of studies have shown that PgR determination provides supplementary information to ER, both in predicting response to endocrine therapy and estimating survival. PgR has proved superior to ER as a prognostic indicator in some studies.

IVD only for markets outside the U.S. RUO for U.S. market.

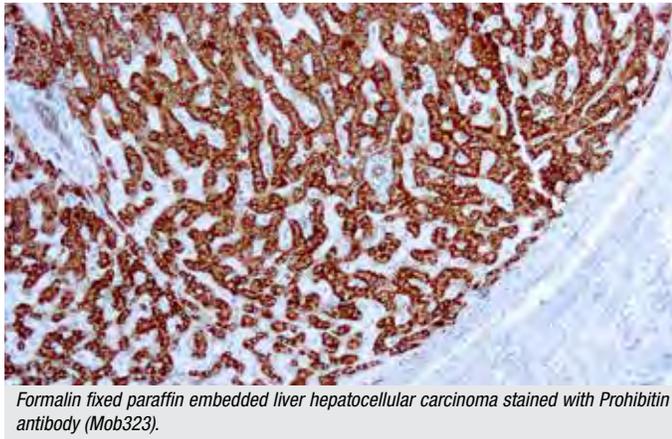


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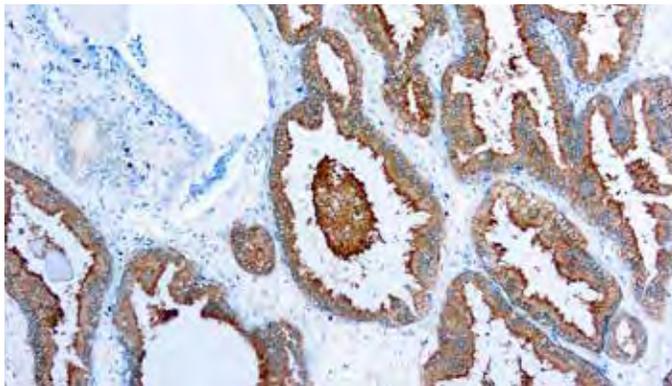
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CONCENTRATED ANTIBODIES KEY: Mob = Mouse Monoclonal | RMAB = Rabbit Monoclonal | RP = Rabbit Polyclonal

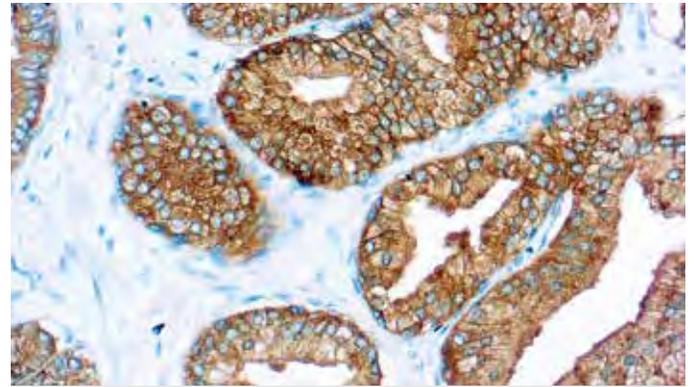
CONCENTRATED VOLUME KEY: MobXXX/RPXXX/RMABXXX = 1ml | Mobxxx/RPxxx/RMABxxx-05 = 0.5ml | Mobxxx/RPxxx/RMABxxx-01 = 0.1ml

**Prohibitin****Clone:** II-14-10**Catalog No.:** Mob323 Concentrated  
PDM152 Prediluted

Formalin fixed paraffin embedded liver hepatocellular carcinoma stained with Prohibitin antibody (Mob323).

**Immunogen:** BALB/C mice were injected with purified recombinant rat prohibitin protein.**Isotype:** IgG1**Positive Control:** Heart**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to a 30 kDa protein known as prohibitin. Prohibitin is an evolutionarily conserved protein located in the inner membrane of mitochondria. Prohibitin shows antiproliferative activity and has been proposed to play a role in normal cell cycle regulation, replicative senescence, cellular immortalization and tumor suppression.**Prostate Specific Antigen (PSA)****Clone:** 35H9**Catalog No.:** Mob548 Concentrated  
PDM548 Prediluted

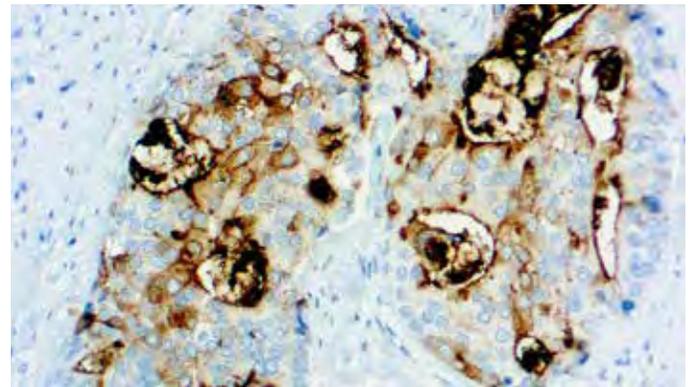
Formalin fixed paraffin embedded human prostate stained with PSA antibody (PDM548).

**Immunogen:** Prokaryotic recombinant protein corresponding to a portion of the N-terminus of the prostate specific antigen molecule.**Isotype:** IgG1.**Positive Control:** Prostate carcinoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with human prostate specific antigen.**Prostate Specific Antigen (PSA)****Catalog No.:** RP033 Concentrated  
PDR007 Prediluted

Formalin fixed paraffin embedded prostate carcinoma stained with PSA antibody (RP033).

**Immunogen:** Prostate specific antigen isolated from human seminal plasma.**Positive Control:** Prostate carcinoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody reacts with PSA. The staining was observed in the prostatic ductal epithelium of normal and neoplastic prostate. No staining with any other cell type has been observed.

RUO in Europe.

**Prostate Specific Membrane Antigen (PSMA)****Clone:** 3E6**Catalog No.:** Mob440 Concentrated

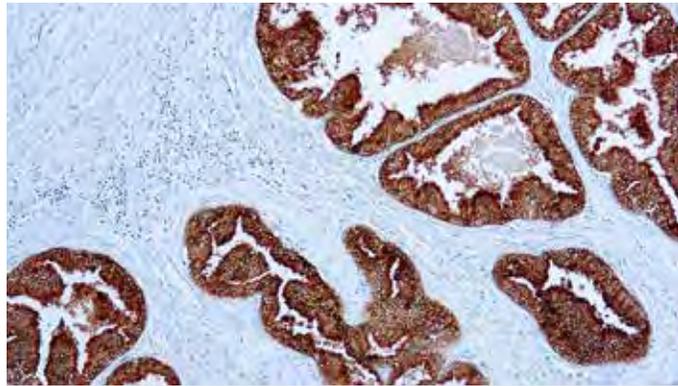
Formalin fixed paraffin embedded prostate carcinoma stained with PSMA antibody (Mob440).

**Immunogen:** BALB/C mice were injected with LNCaP membrane preparation and immunoaffinity purified PSMA.**Isotype:** IgG1**Positive Control:** Prostate carcinoma**Cellular Localization:** Cytoplasmic and/or membrane**Specificity:** PSMA is a 750 amino acid type II membrane glycoprotein. PSMA is expressed in normal and malignant prostatic epithelium and in a subset of non-prostatic tissues. PSMA expression has been shown to correlate with the progression of prostate cancer, with highest levels expressed in hormone-refractory and metastatic disease. PSMA expresses in the neovasculature of a variety of non-prostatic solid tumors.

## Prostatic Acid Phosphatase (PSAP)

Clone: PASE/4LJ

Catalog No.: Mob085 Concentrated  
PDM037 Prediluted



Formalin fixed paraffin embedded prostate carcinoma stained with PSAP antibody (Mob085).

**Immunogen:** BALB/C mice were injected with purified prostatic acid phosphatase from human seminal plasma.

**Isotype:** IgG1, kappa

**Positive Control:** Prostate carcinoma

**Cellular Localization:** Cytoplasm

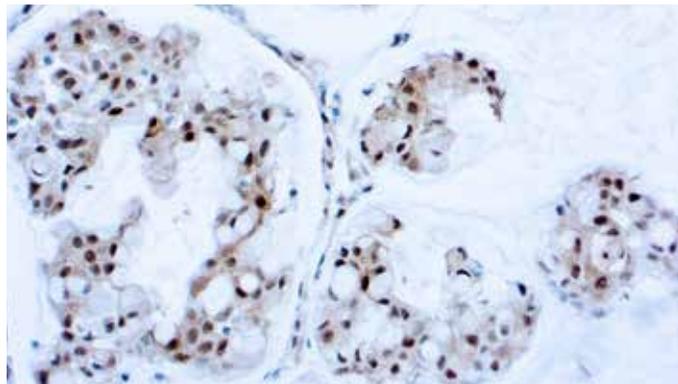
**Specificity:** This antibody is specific to human prostatic acid phosphatase. It reacts with the glandular epithelium of normal and hyperplastic prostate and with prostate adenocarcinoma.

RUO in Europe.

## PTEN

Clone: 6H2.1

Catalog No.: Mob574 Concentrated  
PDM574 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with PTEN antibody (Mob574).

**Immunogen:** C-terminal 100 amino acids of PTEN.

**Isotype:** IgG2a, kappa

**Positive Control:** Breast cancer

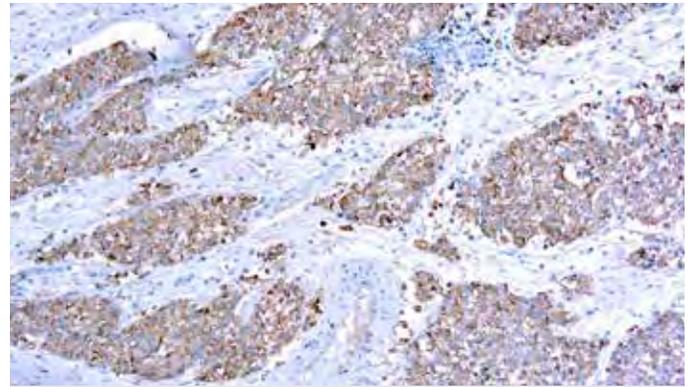
**Cellular Localization:** Nuclear and Cytoplasmic

**Specificity:** PTEN gene is a tumor suppressor gene that maps to chromosome 10q23. PTEN, a novel tumor suppressor, functions as a regulator of both cell cycle progression and apoptosis. Potentially, mutation and deletion of PTEN gene may result in a new signal transduction pathway related to human malignant tumors. Studies have demonstrated a reduction of PTEN expression in advanced breast cancers.

## Rad51

Clone: 51RAD01

Catalog No.: Mob324 Concentrated



Formalin fixed paraffin embedded human testis stained with Rad51 (Mob324).

**Immunogen:** BALB/C mice were injected with recombinant Rad51 protein.

**Isotype:** IgG1, kappa

**Positive Control:** Testis

**Cellular Localization:** Nuclear

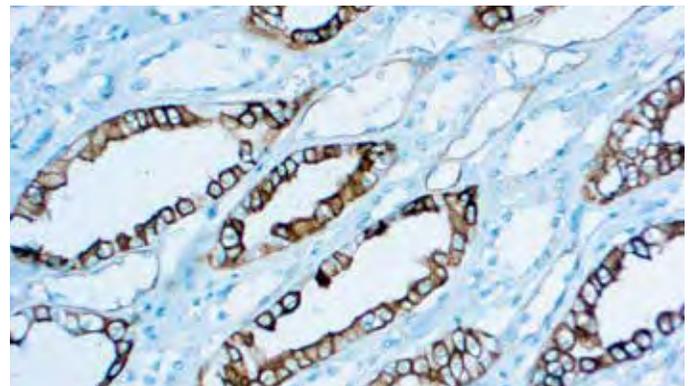
**Specificity:** This antibody is specific to a 37-43 kDa protein known as Rad51. Rad51 is similar to RecA. Rad51 promotes homologous pairing and strand exchange within a regular nucleoprotein filament. Rad51 has been suggested to be involved in homologous recombination and in cell proliferation regulation.

IVD only for markets outside the U.S. RUO for U.S. market.

## Renal Cell Carcinoma (RCC)

Clone: PN-15

Catalog No.: Mob465 Concentrated  
PDM169 Prediluted



Formalin fixed paraffin embedded human kidney stained with RCC antibody (PDM169).

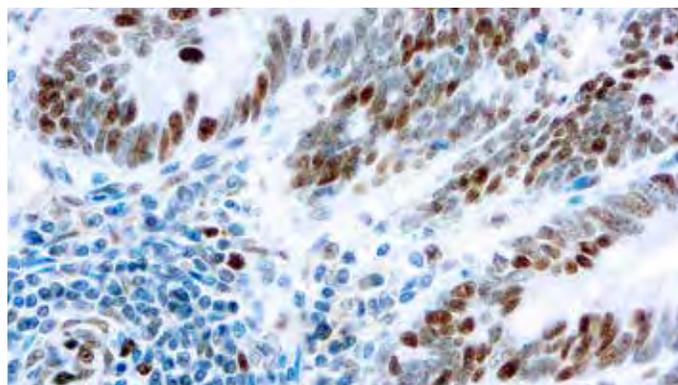
**Immunogen:** BALB/C mice were injected with human renal cortical tissue homogenate.

**Isotype:** IgG1

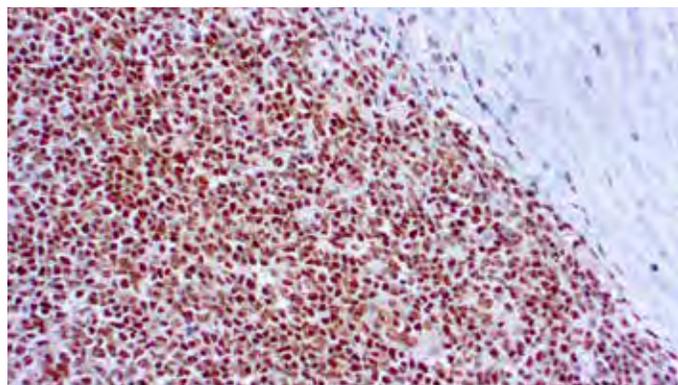
**Positive Control:** Normal kidney or renal cell carcinoma

**Cellular Localization:** Membrane

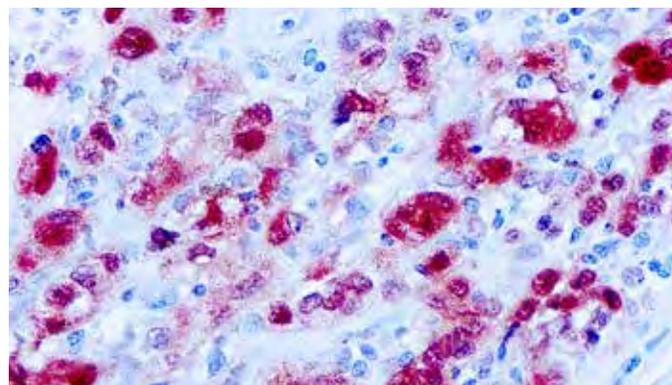
**Specificity:** This antibody recognizes a 200 kD glycoprotein (gp200) localized in the brush border of the proximal renal tubules and the luminal surface of Bowman's capsule. gp200 was expressed by 93% of primary and 84% of metastatic renal carcinomas. Gp200 glycoprotein is also localized in the breast lobules and ducts, parathyroid glands and epididymis.

**Retinoblastoma Gene Protein (Rb)****Clone:** 1F8**Catalog No.:** Mob220 Concentrated  
PDM111 Prediluted

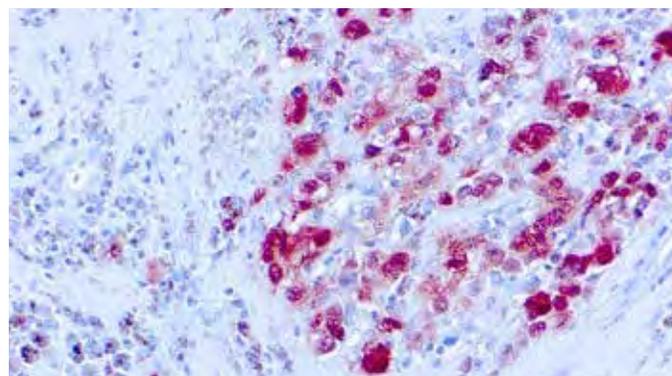
Formalin fixed paraffin embedded human colon carcinoma stained with Retinoblastoma antibody (Mob220).

**Immunogen:** Recombinant human Rb protein.**Isotype:** IgG1, kappa**Positive Control:** Colon carcinoma**Cellular Localization:** Nuclear**Specificity:** This antibody recognizes human retinoblastoma gene protein. Rb gene, a prototype of tumor suppressor genes, has been associated with development and/or progression of bladder cancer as well as sarcoma and small cell lung cancer. Functional Rb gene loss has been reported to occur in bladder cancer and osteosarcoma. A significantly poorer tumor-free survival rate was noted for those patients who had a tumor with an altered Rb protein with or without vascular invasion.**RPA/p34****Clone:** 9H8**Catalog No.:** Mob329 Concentrated

Formalin fixed paraffin embedded human tonsil stained with RPA/p34 antibody (Mob329).

**Immunogen:** BALB/C mice were injected with purified human RPA protein.**Isotype:** IgG1, kappa**Positive Control:** Tonsil**Cellular Localization:** Nuclear**Specificity:** This antibody reacts with a 32-34 kDa protein known as replication protein A (RPA). RPA is involved in DNA replication, repair and recombination. Human RPA is a stable heterotrimer of 70 kDa, 32-34 kDa and 11-14 kDa subunits (RPA70, RPA32 and RPA14 respectively). RPA is required for the SV40 large tumor antigen-catalyzed unwinding for SV40 DNA and stimulates DNA polymerase  $\alpha$  and  $\delta$ .**S-100****Clone:** 4C4.9**Catalog No.:** Mob377 Concentrated  
PDM194 Prediluted

Formalin fixed paraffin embedded human skin stained with S100 antibody (Mob377).

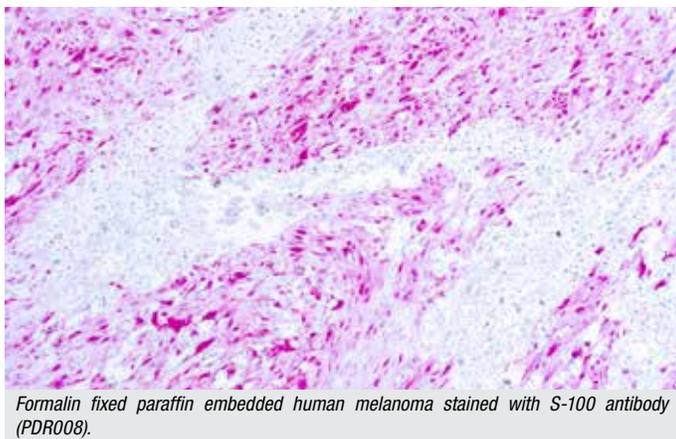
**Immunogen:** BALB/C mice were immunized with purified bovine brain S-100 proteins.**Isotype:** IgG2a, Kappa**Positive Control:** Melanoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody stains with S-100 protein. S-100 belongs to the family of calcium binding proteins such as calmodulin and troponin C. S-100a and S-100b proteins are two members of the S-100 family. S-100a is composed of an  $\alpha$  and  $\beta$  chain whereas S-100b is composed of two  $\beta$  chains. This antibody stains schwannomas, ependymomas, astroglomas, almost all benign and malignant melanomas and their metastases.**S-100****Clone:** SH-B1**Catalog No.:** Mob111 Concentrated  
PDM088 Prediluted

Formalin fixed paraffin embedded human melanoma stained with S-100 antibody (PDM088).

**Immunogen:** Purified bovine brain S-100 $\beta$  preparation.**Isotype:** IgG1**Positive Control:** Melanoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific against an epitope located on the  $\beta$  chain (i.e. in S-100a and S-100b) but not on the  $\alpha$  chain of S-100 (i.e. in S-100a and S-100a $\alpha$ ). This antibody can be used to localize S-100a and S-100b in various tissue sections.

## S-100

Catalog No.: **RP035 Concentrated**  
**PDR008 Prediluted**



Formalin fixed paraffin embedded human melanoma stained with S-100 antibody (PDR008).

**Immunogen:** Affinity purified S-100 protein isolated from cow brain.

**Positive Control:** Melanoma

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody reacts with cow S-100 protein a and b. It shows strong cross-reactivity with human S-100 a and b. In the brain, it labels glial and ependymal cells. Melanocytes and Langerhans cells of the skin stain positive with this antibody.

## Smad4

Catalog No.: **RP173 Concentrated**  
**PDR173 Prediluted**



Formalin fixed paraffin embedded human Colon Ca stained with Smad4 (RP173).

**Immunogen:** Recombinant fragment corresponding to a region within amino acids 322 and 552 of SMAD4.

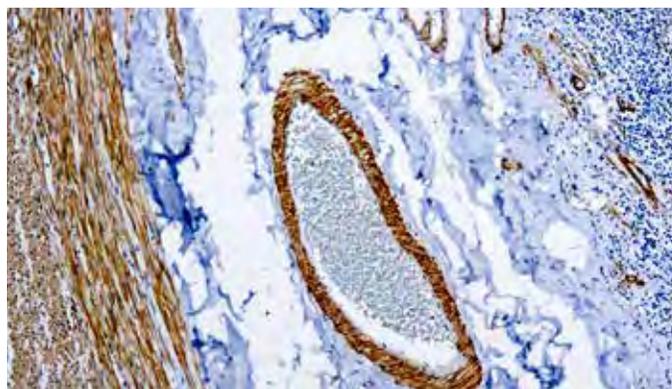
**Positive Control:** Colon Ca, Pancreas Ca

**Cellular Localization:** Nuclear/ Cytoplasm

**Specificity:** SMADs are members of the MAD-related family of molecules. MAD-related proteins are a family of intracellular proteins that are essential components in the signaling pathways of the serine/threonine kinase receptors of the transforming growth factor beta superfamily. Alterations in the SMAD4 gene was primarily discovered in pancreatic cancer (duct adenocarcinoma) but occur in a variety of cancers such as colorectal cancer, gastric cancer, prostate cancer, melanomas, head and neck cancers and many others, though with higher frequencies in gastrointestinal tract cancers. Loss of SMAD4 expression in tumors has also been shown to affect cancer progression and therapy, such as reduced response to adjuvant chemotherapy.

## Smooth Muscle Myosin

Clone: **SMMS-1**  
Catalog No.: **Mob467 Concentrated**  
**PDM175 Prediluted**



Formalin fixed paraffin embedded human appendix stained with Smooth Muscle Myosin antibody (Mob467).

**Immunogen:** Human uterus smooth muscle extract.

**Isotype:** IgG1, Kappa

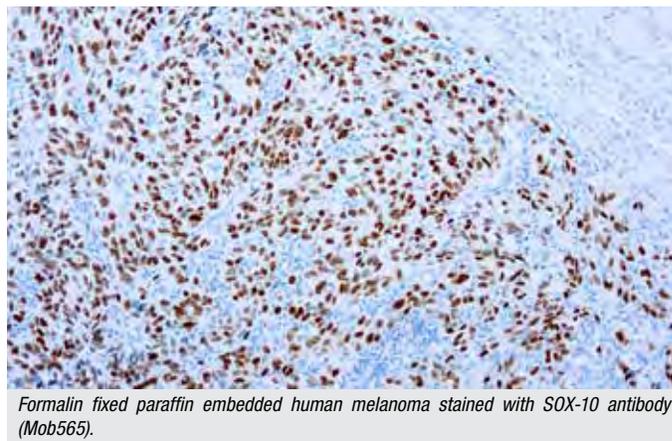
**Positive Control:** Colon, appendix

**Cellular Localization:** Cytoplasmic

**Specificity:** Monoclonal anti-smooth muscle myosin reacts with myosin heavy chain polypeptides of 200 and 204 kDa. It does not react with skeletal, cardiac, or non-muscle myosin. In immunohistochemistry it stains vascular and visceral smooth muscle cells and cells that have smooth muscle-like characteristics.

## SOX-10

Clone: **20B7**  
Catalog No.: **Mob565 Concentrated**  
**PDM565 Prediluted**



Formalin fixed paraffin embedded human melanoma stained with SOX-10 antibody (Mob565).

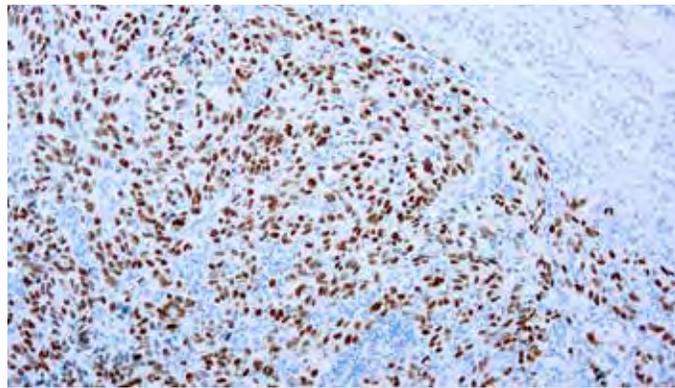
**Immunogen:** Human SOX-10 recombinant protein.

**Isotype:** IgG1

**Positive Control:** Melanoma

**Cellular Localization:** Nuclear

**Specificity:** SOX-10 is also an important marker in malignant tumors such as melanoma, breast carcinoma, gliomas, and benign tumors such as schwannomas. SOX-10 is considered as a very reliable marker for recognizing residual desmoplastic melanomas. In normal tissues, it is expressed in Schwann cells, melanocytes and myoepithelial cells of salivary, bronchial and mammary glands. SOX-10 expression is also observed in mast cells.

**SOX-10****Clone:** EP268**Catalog No.:** RMAB077 Concentrated  
RMPD077 Prediluted

Formalin fixed paraffin embedded human melanoma stained with SOX-10 (RMAB077).

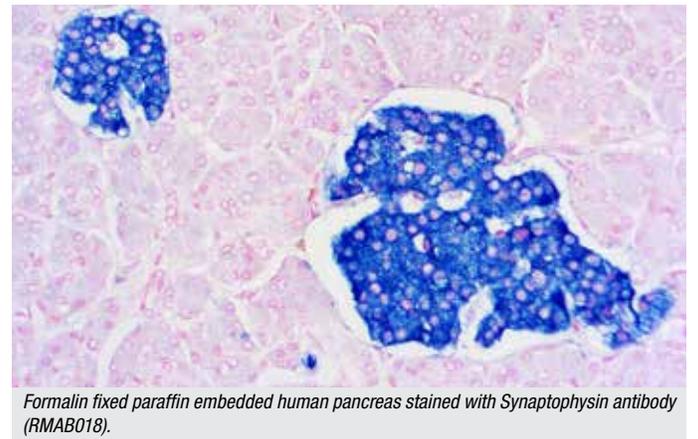
**Immunogen:** Recombinant fragment corresponding to residues in human SOX-10 protein.

**Isotype:** Rabbit IgG

**Positive Control:** Melanoma

**Cellular Localization:** Nuclear

**Specificity:** SOX-10 is widely expressed in normal human tissues including melanocytes and breast tissue. SOX-10 is also an important marker in malignant tumors such as melanoma, breast carcinomas of basal-like triple negative type, gliomas, and benign tumors such as schwannomas. More importantly, SOX-10 has been shown to be expressed in 97-100% of desmoplastic and spindle cell melanomas and has also been shown to be expressed in 100% of nevi. Spindle cell and desmoplastic melanomas are rare variants of invasive cutaneous melanoma, with an annual incidence rate of approximately 2 per 100,000. The majority of oligodendrogliomas and a large percentage of astrocytomas and poorly differentiated glioblastomas have also been shown to express SOX10.

**Synaptophysin****Clone:** SP11**Catalog No.:** RMAB018 Concentrated  
RMPD018 Prediluted

Formalin fixed paraffin embedded human pancreas stained with Synaptophysin antibody (RMAB018).

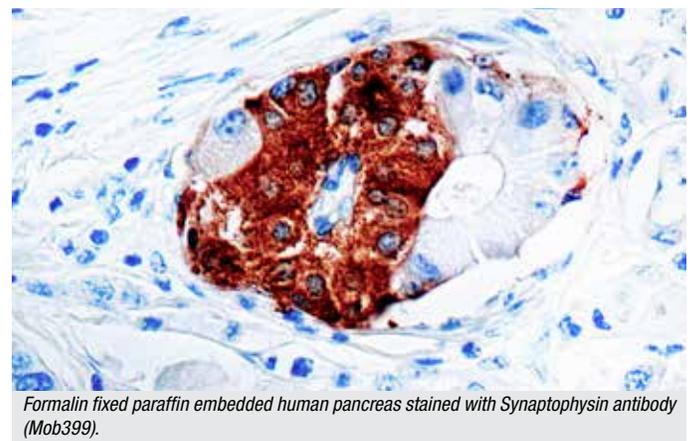
**Immunogen:** A synthetic peptide of human synaptophysin.

**Isotype:** Rabbit IgG

**Positive Control:** Pancreas

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody recognizes a protein of 38kDa, identified as synaptophysin. It labels normal neuroendocrine cells of human adrenal medulla, carotid body, skin, pituitary gland, thyroid, lung, pancreas, gastrointestinal mucosa, Paneth's cells in the gastrointestinal tract and gastric parietal cells. Neurons in the brain, spinal cord, and retina are also labeled. In combination with anti-chromogranin A and anti-NSE, anti-synaptophysin is very useful in the identification of normal neuroendocrine cells and neuroendocrine neoplasms.

**Synaptophysin****Clone:** SYP02**Catalog No.:** Mob399 Concentrated

Formalin fixed paraffin embedded human pancreas stained with Synaptophysin antibody (Mob399).

**Immunogen:** BALB/C mice were injected with a synthetic peptide encoding a region near the C-terminal end of the synaptophysin protein.

**Isotype:** IgG1

**Positive Control:** Pancreas

**Cellular Localization:** Cytoplasmic

**Specificity:** This antibody is specific to a 38 kDa protein. Synaptophysin is a glycoprotein occurring in presynaptic vesicles of neurons in the brain, spinal cord, retina, vesicles of adrenal medulla and in neuromuscular junctions. This antibody reacts with neuroendocrine neoplasms of neural as well as epithelial types.

## Diagnostic BioSystems' Primary Antibodies

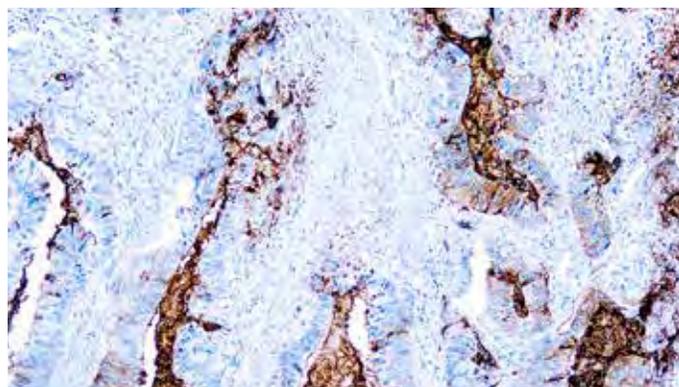
come in prediluted and concentrated formats, optimized to provide high quality immunohistochemistry stains.

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## TAG-72/CA 72-4

Clone: B72.3

Catalog No.: Mob288 Concentrated  
PDM100 Prediluted



Formalin fixed paraffin embedded colon carcinoma stained with TAG-72 antibody (Mob288).

**Immunogen:** BALB/C mice were injected with membrane enriched fraction of a human breast carcinoma liver metastasis.

**Isotype:** IgG1, kappa

**Positive Control:** Breast carcinoma

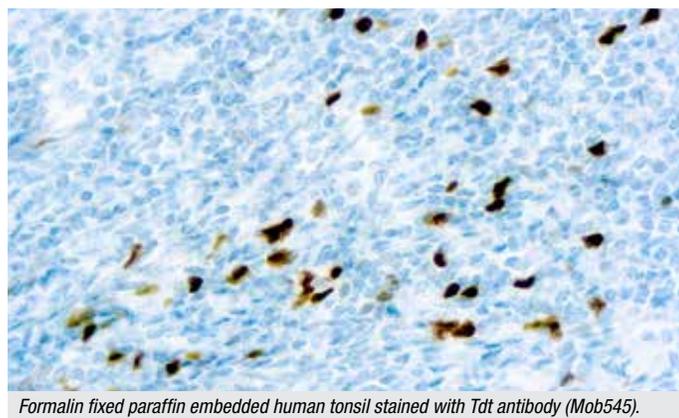
**Cellular Localization:** Cytoplasmic, cell surface

**Specificity:** This antibody is specific to an oncofetal antigen of >1,000 kDa known as tumor associated glycoprotein (TAG-72) or CA 72-4. This antibody defines the mucin carried sialylated-Tn antigen. This antibody stains the majority of human adenocarcinomas including colorectal, pancreatic, gastric, ovarian, endometrial, mammary and non-small cell lung cancer.

## Tdt (Terminal Deoxynucleotidyl Transferase)

Clone: SEN28

Catalog No.: Mob545 Concentrated  
PDM096 Prediluted



Formalin fixed paraffin embedded human tonsil stained with Tdt antibody (Mob545).

**Immunogen:** BALB/C mice were injected with Tdt.

**Isotype:** IgG2a, kappa

**Positive Control:** Thymus

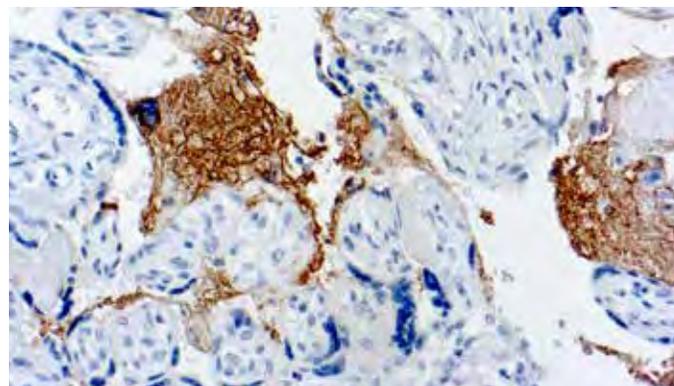
**Cellular Localization:** Nuclear

**Specificity:** This antibody stains a 60kDa peptide in human lymphoblasts. Tdt is present in the cells during immunoglobulin gene rearrangement and plays an important role in lymphocyte maturation. Tdt marks both T and B immature lymphocytes normally found in thymus and bone marrow.

## Thrombospondin (TSP)

Clone: A6.1

Catalog No.: Mob315 Concentrated



Formalin fixed paraffin embedded human placenta stained with Thrombospondin antibody (Mob315).

**Immunogen:** BALB/C mice were injected with reduced and alkylated purified human TSP (fully denatured) from the supernatant of thrombin-activated platelets.

**Isotype:** IgG1

**Positive Control:** Tonsil

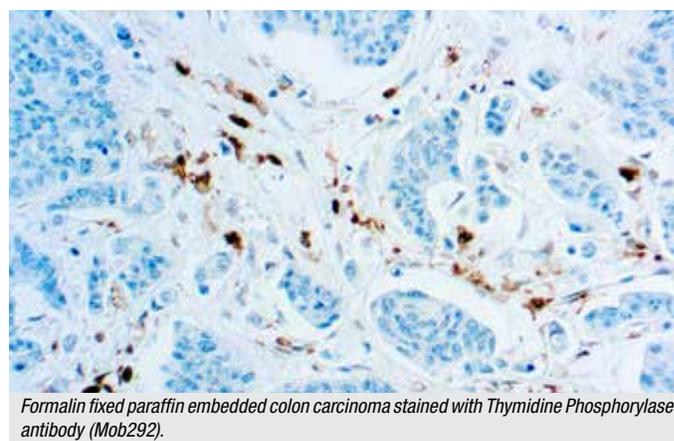
**Cellular Localization:** Secretory granules, Golgi complex, endoplasmic reticulum

**Specificity:** This antibody is specific to 450 kDa (non-reduced) and 170 to 180 kD (reduced) form of thrombospondin. Thrombospondin is a protein from platelet  $\alpha$  granules. It is secreted at sites of platelet activation and aggregation and is involved in the differentiation of leukocytes, fibroblasts, smooth muscle and endothelial cells.

## Thymidine Phosphorylase/ Platelet-Derived Endothelial Cell Growth Factor

Clone: P-GF.44C

Catalog No.: Mob292 Concentrated  
PDM292 Prediluted



Formalin fixed paraffin embedded colon carcinoma stained with Thymidine Phosphorylase antibody (Mob292).

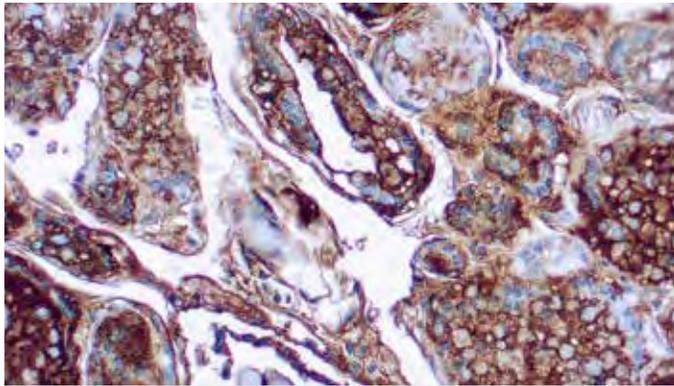
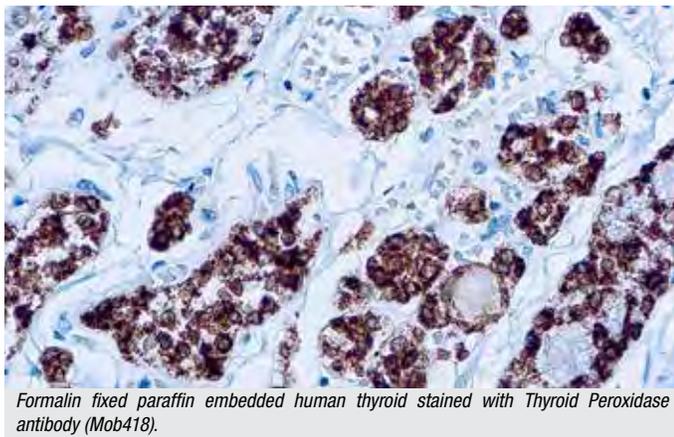
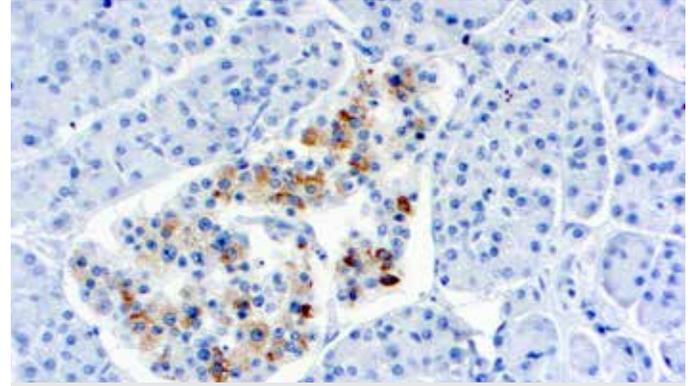
**Immunogen:** BALB/C mice were injected with a recombinant full length human thymidine phosphorylase (TP/PD-ECGF) protein.

**Isotype:** IgG1

**Positive Control:** Breast carcinoma

**Cellular Localization:** Cytoplasmic, Nuclear

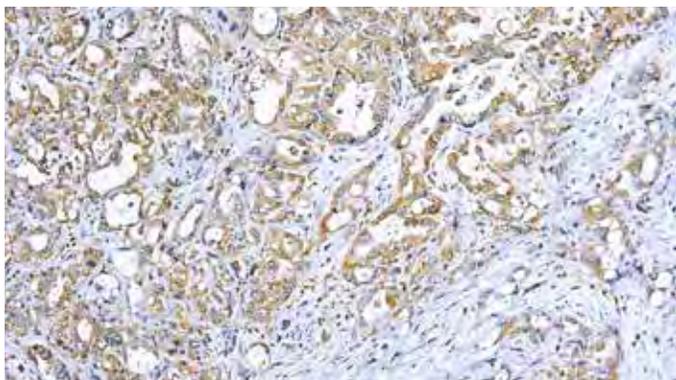
**Specificity:** This antibody is specific to a 55 kDa protein known as platelet-derived endothelial growth factor (PD-ECGF), or thymidine phosphorylase (TP). High levels of TP/PD-ECGF are observed in cancer patients. High intracellular levels of TP/PD-ECGF are associated with increased sensitivity to fluoropyrimidine chemotherapeutic agents.

**Thyroglobulin****Clone:** 1D4**Catalog No.:** Mob223 Concentrated  
PDM576 Prediluted*Formalin fixed paraffin embedded thyroid stained with Thyroglobulin antibody (Mob223).***Immunogen:** BALB/C mice were immunized with purified human thyroglobulin.**Isotype:** IgG2a**Positive Control:** Thyroid**Cellular Localization:** Cytoplasmic**Specificity:** This antibody recognizes thyroglobulin in hyperplastic and neoplastic thyroid. Thyroglobulin is a protein of 670 kDa consisting of two identical subunits. Thyroglobulin is synthesized by the follicular epithelial cells of the thyroid.**Thyroid Peroxidase****Clone:** MoAb47**Catalog No.:** Mob418 Concentrated  
PDM418 Prediluted*Formalin fixed paraffin embedded human thyroid stained with Thyroid Peroxidase antibody (Mob418).***Immunogen:** Human thyroid peroxidase (hTPO) purified from thyroid microsomes by immunoaffinity chromatography.**Isotype:** IgG1**Positive Control:** Thyroid**Cellular Localization:** Cytoplasmic**Specificity:** Thyroid peroxidase (TPO) is a transmembrane protein of 107kDa containing a heme prosthetic group. It is present as a dimer on the apical surface of thyroid follicular cells. TPO is the primary enzyme involved in thyroid hormone synthesis. Malignant thyroid tumors exhibit an anomaly in TPO resulting in lower affinity for anti-TPO. This antibody may aid in the differentiation between benign and malignant thyroid tumors.**TIMP-2****Clone:** 3A4**Catalog No.:** Mob318 Concentrated  
PDM318 Prediluted*Formalin fixed paraffin embedded human pancreas stained with TIMP-2 antibody (Mob318).***Immunogen:** BALB/C mice were injected with a synthetic peptide from the N-terminal region of human TIMP-2.**Isotype:** IgG2a, kappa**Positive Control:** Colon carcinoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to 21 kDa protein known as TIMP-2. TIMP-1 and TIMP-2 are inhibitory enzymes of matrix metalloproteinase family. TIMP are of great importance in the maintenance of connective tissue integrity. TIMP-2 shows the highest binding affinity to both the latent (pro) and active forms of 72 kDa Type IV collagenase (MMP-2) and active form of 92 kDa type IV collagenase (MMP-9). TIMP inhibit the proteolytic invasiveness of tumor cells and normal placental trophoblast cells.*IVD only for markets outside the U.S. RUO for U.S. market.*

## TNF Alpha

Clone: DBM15.28

Catalog No.: Mob502 Concentrated  
PDM230 Prediluted



Formalin fixed paraffin embedded human breast carcinoma stained with TNF Alpha (Mob502).

**Immunogen:** Recombinant full-length human TNF-alpha protein.

**Isotype:** IgM, kappa

**Positive Control:** Histiocytoma, colon, pancreas

**Cellular Localization:** Cytoplasmic and extracellular (secreted)

**Specificity:** This MAbs recognizes human 17-26kDa protein, which is identified as cytokine TNF Alpha (Tumor Necrosis Factor Alpha). Monomeric human TNF Alpha is a 157 amino acid protein (non-glycosylated) with a reported molecular weight of 17 kDa and can be expressed as a free molecule, also TNF Alpha is generated as a precursor form called transmembrane TNF Alpha can be expressed as a cell surface type II polypeptide consisting of 233 amino acid residues molecular weight 26 kDa. TNF Alpha is an important cell-signaling component of the immune system. It is a protein secreted by LPS stimulated macrophages, and causes tumor necrosis when injected into tumor bearing mice. TNF Alpha is currently being evaluated in treatment of certain cancers and AIDS Related Complex.



## Diagnostic BioSystems' Primary Antibodies

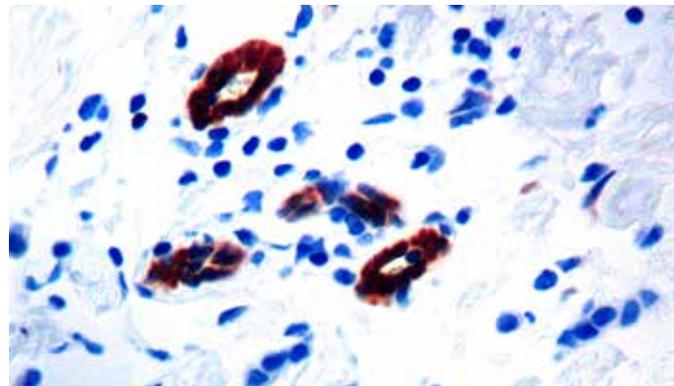
are well suited for both single-step and two-step polymer systems.

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## Transglutaminase II

Clone: CUB 7402

Catalog No.: Mob353 Concentrated



Formalin fixed paraffin embedded breast carcinoma stained with Transglutaminase II antibody (Mob353).

**Immunogen:** BALB/C mice were injected with purified guinea pig liver transglutaminase.

**Isotype:** IgG1

**Positive Control:** Breast carcinoma

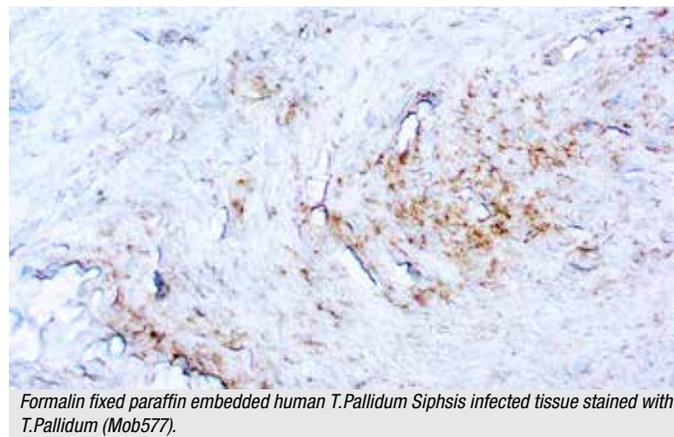
**Cellular Localization:** Cytoplasmic, cell membrane, extracellular matrix

**Specificity:** This antibody reacts with a 77-85 kDa protein known as transglutaminase II (TGase II). TGase II catalyzes calcium-dependent post-translational modification of proteins by formation of an isopeptide bond within or between polypeptide chains. Different tissue and cell types express varying amounts of tissue transglutaminase.

## Treponema Pallidum

Clone: 2121

Catalog No.: Mob577 Concentrated  
PDM577 Prediluted



Formalin fixed paraffin embedded human T. Pallidum Siphis infected tissue stained with T. Pallidum (Mob577).

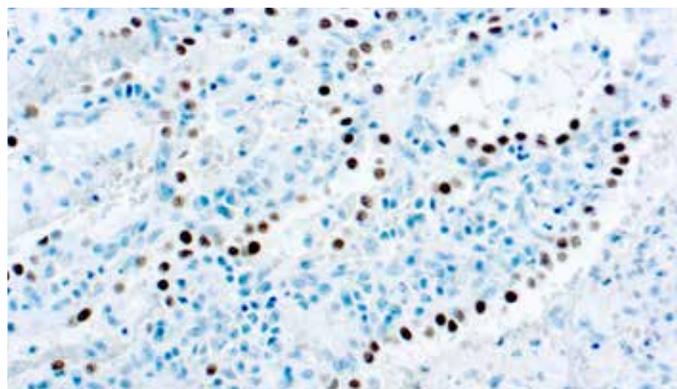
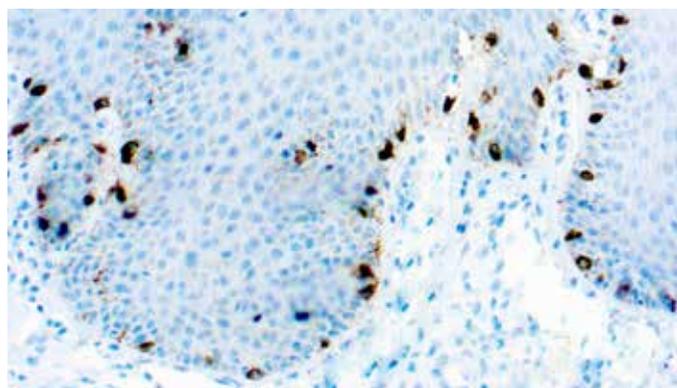
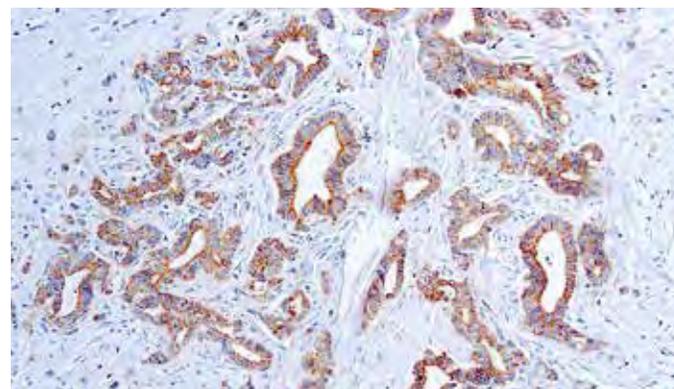
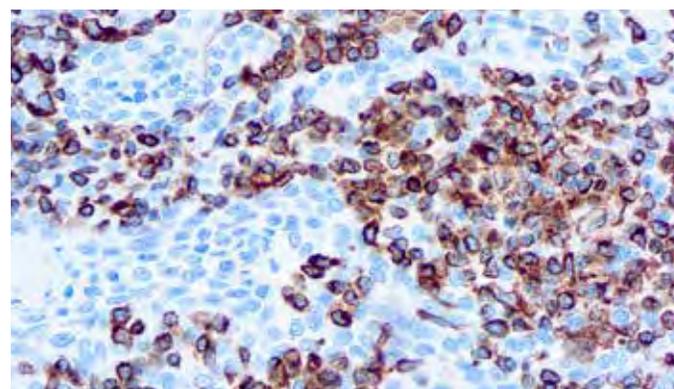
**Immunogen:** Full Length native protein corresponding to Treponema pallidum.

**Isotype:** IgG2b

**Positive Control:** T. Pallidum Infected Tissue

**Cellular Localization:** Cytoplasmic

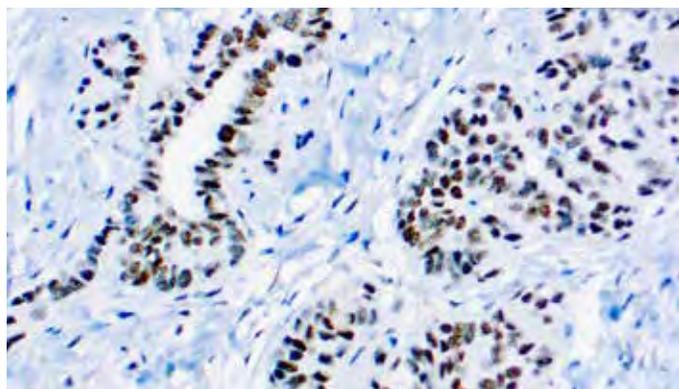
**Specificity:** Treponema pallidum is the causative agent of syphilis. It is a gram negative spirochete, a helical to sinusoidal bacterium with outer and cytoplasmic membranes, a thin peptidoglycan layer, and periplasmic flagella.

**TTF-1 (Thyroid Transcription Factor-1)****Clone:** 8G7G3/1**Catalog No.:** Mob285 Concentrated  
PDM104 Prediluted*Formalin fixed paraffin embedded lung adenocarcinoma stained with TTF-1 (Mob285).***Immunogen:** BALB/C mice were injected with a recombinant rat protein.**Isotype:** IgG1**Positive Control:** Lung**Cellular Localization:** Nuclear**Specificity:** This antibody is specific to a 40 kDa protein, which is identified as thyroid transcription factor (TTF-1). TTF-1 is expressed in epithelial cells of the thyroid gland and lung. TTF-1 stains primary lung adenocarcinoma and small cell carcinoma but does not stain colon and breast carcinoma.**Tyrosinase, Melanoma Marker****Clone:** T311**Catalog No.:** Mob290 Concentrated  
PDM150 Prediluted*Formalin fixed paraffin embedded human melanoma stained with Tyrosinase antibody (Mob290).***Immunogen:** BALB/C mice were injected with a recombinant tyrosinase protein.**Isotype:** IgG2a**Positive Control:** Melanoma**Cellular Localization:** Cytoplasmic**Specificity:** This antibody is specific to a cluster of proteins between 70-80 kDa known as tyrosinase. This antibody does not show any cross-reaction with MAGE-1 and tyrosinase-related protein-1, TRP-1/gp75. Staining of melanomas with this antibody showed tyrosinase in melanotic as well as amelanotic variants.**Vascular Endothelial Growth Factor (VEGF)****Clone:** VG1**Catalog No.:** Mob308 Concentrated  
PDM165 Prediluted*Formalin fixed paraffin embedded human kidney stained with VEGF antibody (Mob308).***Immunogen:** BALB/C mice were injected with a recombinant VEGF protein.**Isotype:** IgG1, kappa**Positive Control:** Angiosarcoma**Cellular Localization:** Cytoplasmic, cell membrane, extracellular matrix**Specificity:** This antibody is specific to a cluster of proteins between 19-22 kDa (reduced). VEGF is a homodimeric disulfide-linked glycoprotein involved in angiogenesis, which promotes tumor progression and metastasis. It exhibits potent mitogenic and permeability-inducing properties specific for the vascular endothelium.**Vimentin, Porcine****Clone:** V9**Catalog No.:** Mob090 Concentrated  
PDM029 Prediluted*Formalin fixed paraffin embedded human tonsil stained with Vimentin antibody (PDM029).***Immunogen:** BALB/C mice were injected with purified vimentin from porcine eye lens.**Isotype:** IgG1, kappa**Positive Control:** Sarcoma, tonsil**Cellular Localization:** Cytoplasm**Specificity:** This antibody reacts with the 57 kDa intermediate filament protein present in the cells of mesenchymal origin. The antibody does not show any cross-reactivity with other intermediate filament proteins. However, it shows a broad interspecies cross-reactivity.

## Wilms Tumor-1 Protein (WT-1)

Clone: 6F-H2

Catalog No.: Mob437 Concentrated  
PDM177 Prediluted



Formalin fixed paraffin embedded Wilms tumor stained with WT-1 antibody (Mob437).

**Immunogen:** BALB/C mice were injected with truncated human WT1 protein corresponding to N-terminal amino acids 1-181.

**Isotype:** IgG1, Kappa

**Positive Control:** Wilms tumor

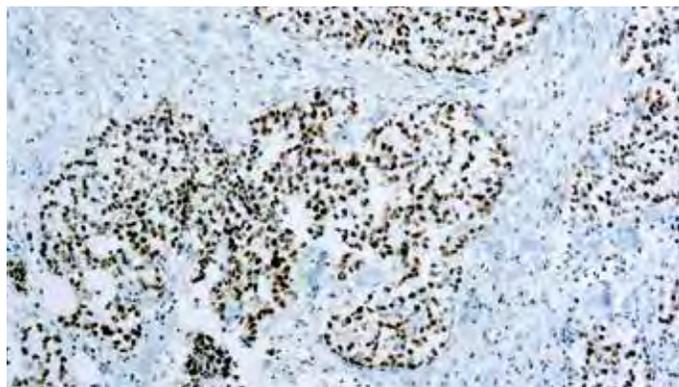
**Cellular Localization:** Nuclear and/or cytoplasmic

**Specificity:** Wilms tumor-1 (WT-1), is a gene involved in the induction of Wilms tumor, a pediatric renal malignancy. Wilms tumor is associated with mutations of WT-1, a zinc-finger transcription factor that is essential for the development of the metanephric kidney and the urogenital system. The WT-1 gene is normally expressed in fetal kidney and mesothelium, and its expression has been suggested as a marker for Wilms tumor and mesothelioma.

## XRCC1

Clone: 33-2-5

Catalog No.: Mob325 Concentrated



Formalin fixed paraffin embedded human testis stained with XRCC1 antibody (Mob325).

**Immunogen:** BALB/C mice were injected with recombinant human XRCC1 protein.

**Isotype:** IgG2b

**Positive Control:** Testis

**Cellular Localization:** Nuclear

**Specificity:** This antibody is specific to an 85 kDa protein known as XRCC1. X-ray repair cross complementing 1 (XRCC1) protein plays a role in excision repair of DNA after ionizing irradiation. XRCC1 binds to DNA ligase III through the C-terminal 96 amino acids and to DNA polymerase  $\beta$  through the N-terminal half. In testis XRCC1 is expressed at high levels.

IVD only for markets outside the U.S. RUO for U.S. market.



## Diagnostic BioSystems' IHC Detection Systems

### Polymer Detection System

Suitable for demonstrating antigens in formalin-fixed paraffin embedded tissues and cryostat sections.

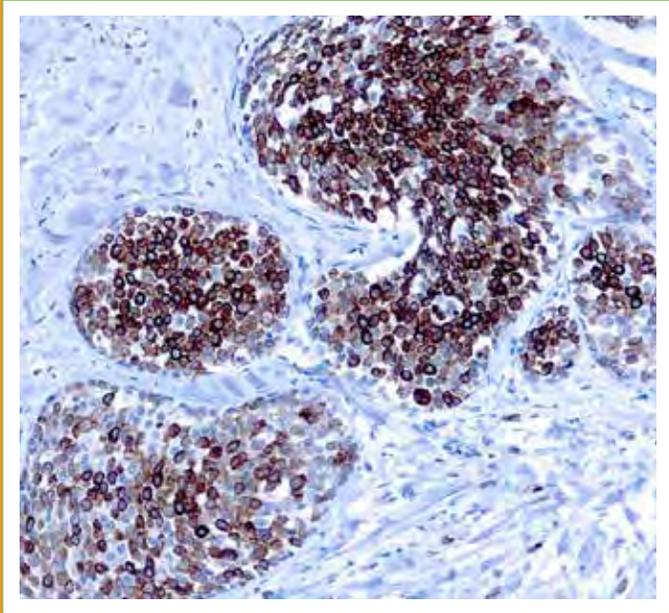
### Streptavidin Biotin Detection System

Convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

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# MOH DAB Kit

The Diagnostic BioSystems MOHs DAB kit is intended for in vitro diagnostic use and is designed for rapid IHC staining in frozen tissue sections and paraffin-embedded tissue sections. Where the time to final results is critical, such as Mohs micrographic surgery, this MOHs DAB Kit can provide reliable IHC results in less than 20 minutes. The clinical interpretation of any staining or its absence should be complemented by morphological studies using proper controls and should be evaluated within the context of the patient's clinical history and other diagnostic tests and proper controls interpreted by a qualified pathologist and/or physician.



The Diagnostics BioSystems MOHs DAB Kit consists of a ready-to-use HRP-Polymer, a concentrated solution of DAB chromogen, and a DAB Substrate Buffer for dilution of the DAB Chromogen. This Kit is optimized for detection of mouse or rabbit primary antibodies.

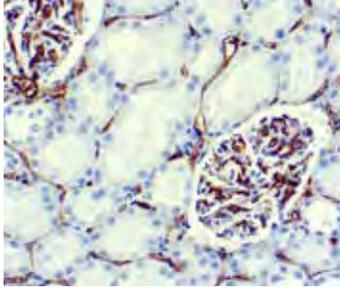
After an initial incubation of the tissue with the selected primary antibody, the HRP-Polymer is next applied to the tissue section. The working DAB solution is prepared by diluting the DAB Chromogen with the DAB Substrate Buffer. After incubation with the HRP-Polymer the tissue is next incubated with the working solution of DAB. The development of a brown reaction product indicates the presence of the antigen of interest, whereas the absence of a brown reaction product indicates the absence of the antigen of interest.

**MOH DAB KIT    CATALOG NO. K083    100 TESTS**

## Advantages of MOH DAB:

- Rapid two-step immunohistochemistry protocol
- Time to results in <20 minutes
- No rinse step required after primary antibody
- Optimized for use with Diagnostic BioSystems Rapid IHC antibodies

# MOH DAB Kit Prediluted Abs

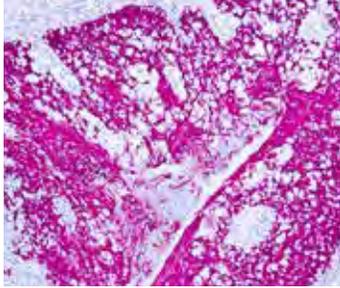
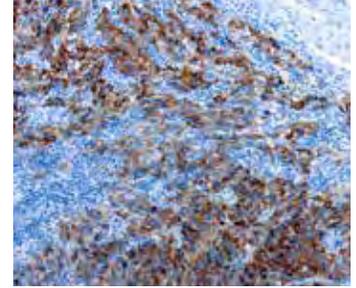


**CD34** IVD  
**Clone:** QBEND/10  
**Catalog No.:** PDM050-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Renal Cell Cancer stained with CD34 (PDM050-MOH).*

**Melanoma** IVD  
**Clone:** HMB45  
**Catalog No.:** PDM011-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Melanoma stained with Melanoma (PDM011-MOH).*

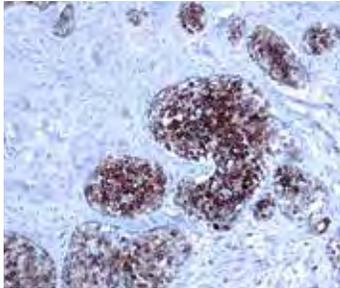
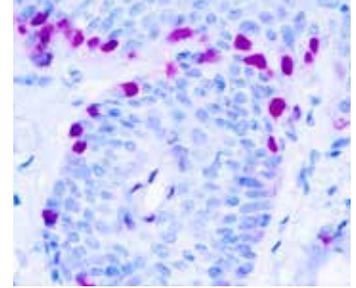


**Cytokeratin** IVD  
**Clone:** CAM 5.2  
**Catalog No.:** PDM181-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Breast Cancer stained with CK7 (PDM563-MOH).*

**MiTF** IVD  
**Clone:** D5  
**Catalog No.:** PDM168-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Melanoma stained with Microphthalmia Transcription Factor (MiTF) (PDM168-MOH).*

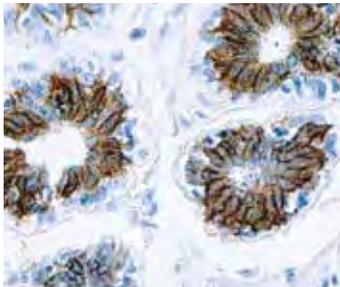
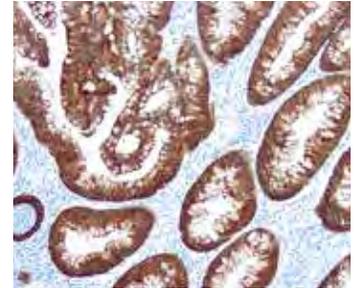


**Cytokeratin 7** IVD  
**Clone:** LP1K  
**Catalog No.:** PDM563-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Breast Cancer stained with CK7 (PDM563-MOH).*

**Pan Cytokeratin** IVD  
**Clone:** E1/AE3  
**Catalog No.:** PDM072-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human colon stained with Cytokeratin Pan (PDM072-MOH).*

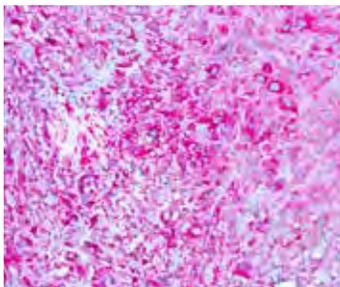
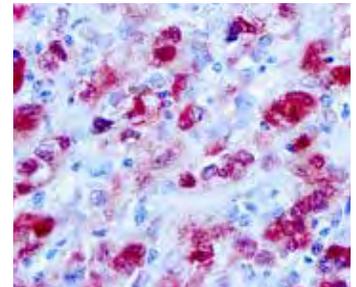


**Epithelial Antigen** IVD  
**Clone:** Ber-EP4  
**Catalog No.:** PDM131-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Breast stained with Epithelial Antigen (PDM131-MOH).*

**S100** IVD  
**Clone:** 4C4.9  
**Catalog No.:** PDM194-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Breast Cancer stained with CK7 (PDM563-MOH).*

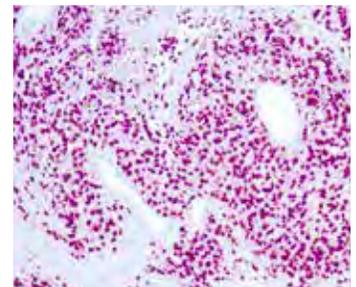


**MART-1** IVD  
**Clone:** A103  
**Catalog No.:** PDM153-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Melanoma stained with MART-1(PDM153-MOH).*

**SOX-10** IVD  
**Clone:** 20B7  
**Catalog No.:** PDM565-MOH  
**Volume:** 3ml Prediluted

*Formalin fixed paraffin embedded human Melanoma stained with SOX-10 (PDM565-MOH).*



# FITC Conjugated Antibodies

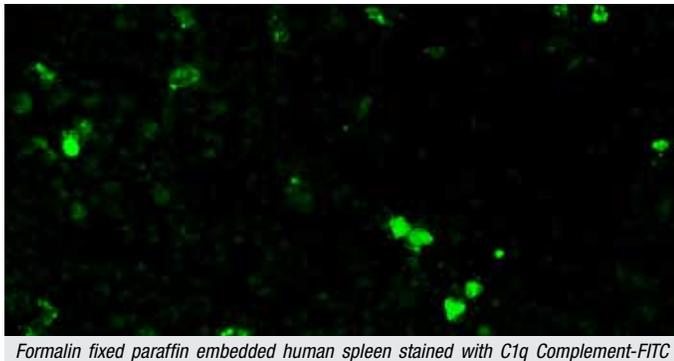
Diagnostic BioSystems offers fluorescein isothiocyanate (FITC) conjugated antibodies. Fluorescent dye-conjugated antibodies can be used in a variety of applications such as immunohistochemistry, fluorescence microscopy and flow cytometry.

FITC

## C1q Complement FITC-Conjugated Antibody



Catalog No.: F010



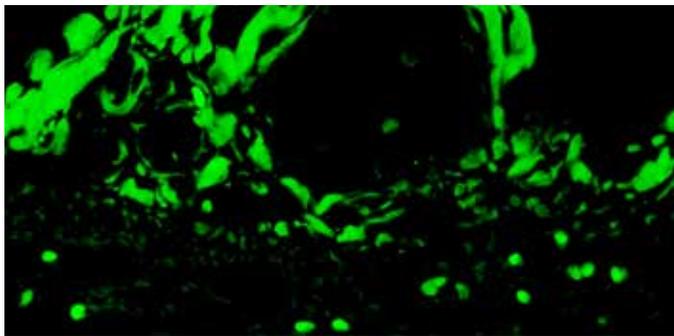
Formalin fixed paraffin embedded human spleen stained with C1q Complement-FITC (F010).

**Immunogen:** C1q isolated from the normal human serum.  
**Specificity:** This antibody reacts with the human C1q complement. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## C3c Complement FITC-Conjugated Antibody



Catalog No.: F003



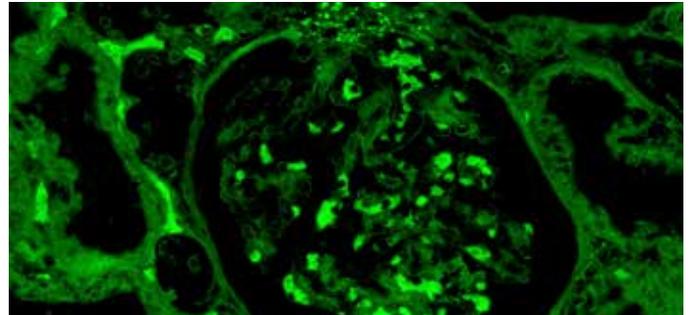
Formalin fixed paraffin embedded human liver stained with C3c Complement-FITC (F003).

**Immunogen:** C3c Complement isolated from complement-activated human serum.  
**Specificity:** This antibody reacts with the human C3c complement and the C3c part of C3 and C3b. It may cross react with the C3c complement from cat, cow, dog, goat, guinea pig, kangaroo, mink, mouse, rat, sheep, and swine. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may be also used for other applications.

## C4c Complement FITC-Conjugated Antibody



Catalog No.: F005



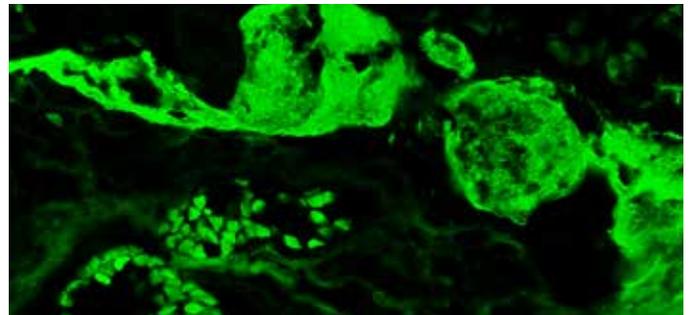
Formalin fixed paraffin embedded human kidney stained with C4c Complement-FITC (F005).

**Immunogen:** C4c Complement isolated from complement-activated human serum.  
**Specificity:** This antibody reacts with human C4, C4b, and C4c but does not react with the C4d epitope. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

## Fibrinogen FITC-Conjugated Antibody



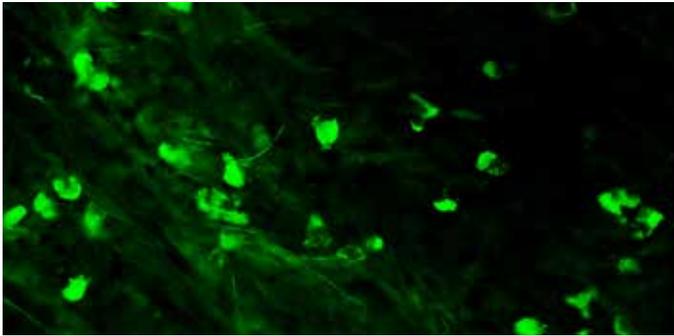
Catalog No.: F006



Formalin fixed paraffin embedded human placenta stained with Fibrinogen-FITC (F006).

**Immunogen:** Fibrinogen isolated from human plasma.  
**Specificity:** This antibody reacts with native fibrinogen and with fibrinogen fragments D, E, X, and Y. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

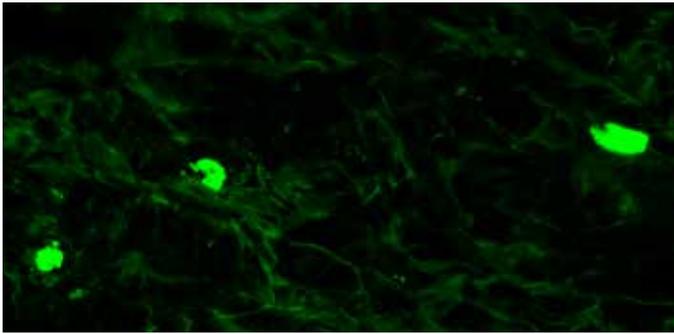
**IgA (alpha chain) FITC-Conjugated Antibody**  
Catalog No.: F007



Formalin fixed paraffin embedded human tonsil stained with IgA-FITC (F007)

**Immunogen:** IgA isolated from human serum.  
**Specificity:** This antibody reacts with the alpha chain of human IgA. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

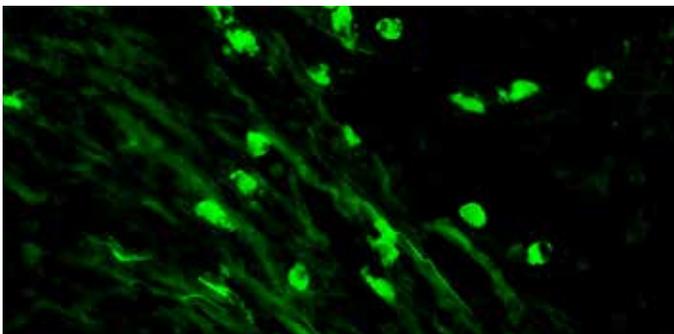
**IgG (Gamma chain) FITC-Conjugated Antibody**  
Catalog No.: F008



Formalin fixed paraffin embedded human tonsil stained with IgG-FITC (F008).

**Immunogen:** IgG isolated from human serum.  
**Specificity:** This antibody reacts with the gamma chain of human IgG. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

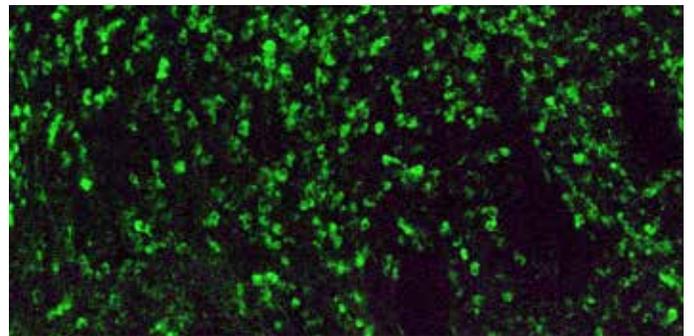
**IgM (Mu chain) FITC-Conjugated Antibody**  
Catalog No.: F009



Formalin fixed paraffin embedded human tonsil stained with IgM-FITC (F009).

**Immunogen:** IgM isolated from the serum of a patient with Waldenstrom's macroglobulinaemia.  
**Specificity:** This antibody reacts with the Mu chain of human IgM. Traces of contaminating antibodies have been removed by solid phase absorption with human plasma proteins. This antibody is well suited for tissue section staining but may also be used for other applications.

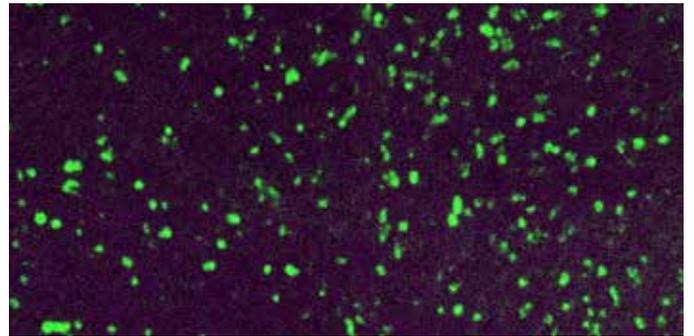
**Kappa Light Chain FITC-Conjugated Antibody**  
Catalog No.: F001



Formalin fixed paraffin embedded human tonsil stained with Kappa-FITC (F001).

**Immunogen:** Pool of human kappa light chain isolated from the urine of patients with Bence Jones Proteinuria.  
**Specificity:** Traces of contaminating antibodies have been removed by solid phase absorption. Only the kappa precipitation line appeared in cross immunoelectrophoresis. This antibody is well suited for tissue section staining but may be used for other applications.

**Lambda Light Chain FITC-Conjugated Antibody**  
Catalog No.: F002



Formalin fixed paraffin embedded human tonsil stained with Lambda-FITC (F002).

**Immunogen:** Pool of human Lambda light chain isolated from the urine of patients with Bence Jones Proteinuria.  
**Specificity:** Traces of contaminating antibodies have been removed by solid phase absorption. Only the lambda precipitation line appeared in cross immunoelectrophoresis. This antibody is well suited for tissue section staining but may also be used for other applications.

DBS Fluorescein  
Isothiocyanate (FITC)  
Conjugated Antibodies

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# FITC CF™ 488

## Conjugated Antibodies

Diagnostic BioSystems now offers CF488 Conjugated Fluorescent Antibodies. Compared to traditional FITC Conjugated Antibodies, CF488 Conjugated Antibodies have high antibody specificity as they only carry minimally negative charges. They also have a shorter emission wavelength for less fluorescence spill-over into the red channel.

Less non-specific binding and less red spill-over than traditional rhodamine chemistry

Unrivalled near-infrared dye to give less non-specific staining

Resists photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies

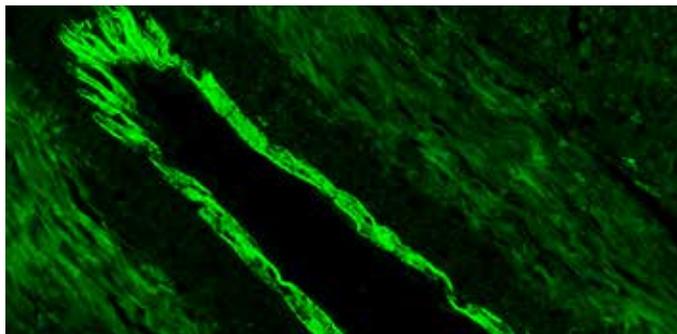
Better resolution in microscopy compared to synthetic dyes

FITC CF™ 488

### Albumin CF™ 488-Conjugated Antibody



Catalog No.: FLC215



Formalin fixed paraffin embedded human Liver stained with Albumin-CF488 (FLC215).

**Immunogen:** Recombinant full-length human ALB protein.

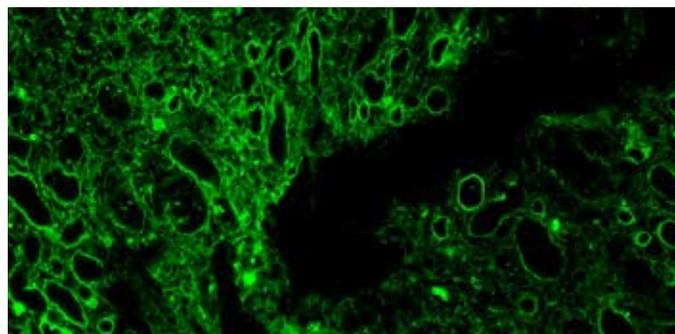
**Specificity:** Albumin is a soluble, monomeric protein, which comprises about one half of the blood serum protein. Albumin functions primarily as a carrier protein for steroids, fatty acids, and thyroid hormones and plays a role in stabilizing extracellular fluid volume. Antibodies conjugated to CF™488 resist photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies.

### Complement 4d (C4d)



### CF™ 488-Conjugated Antibody

Catalog No.: FLC211



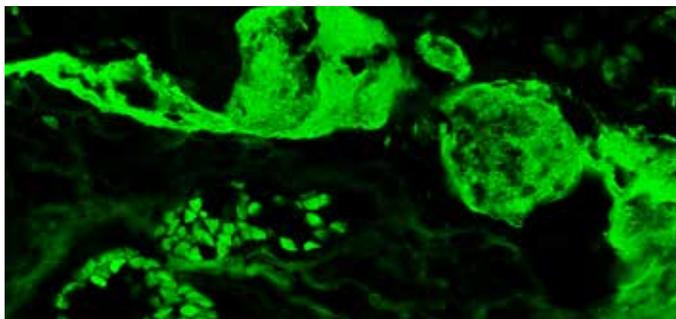
Formalin fixed paraffin embedded human kidney stained with C4d-CF488 (FLC211).

**Immunogen:** Recombinant human Complement 4d protein.

**Specificity:** Anti-C4d, combined with anti-C3d, can be utilized as a tool for diagnosis of allograft rejection that may warrant a prompt and aggressive anti-rejection treatment. Conjugated to CF™488, it shows less non-specific binding and less red spill-over than traditional rhodamine chemistry.

## Fibrinogen CF<sup>TM</sup>488-Conjugated Antibody

Catalog No.: FLC216



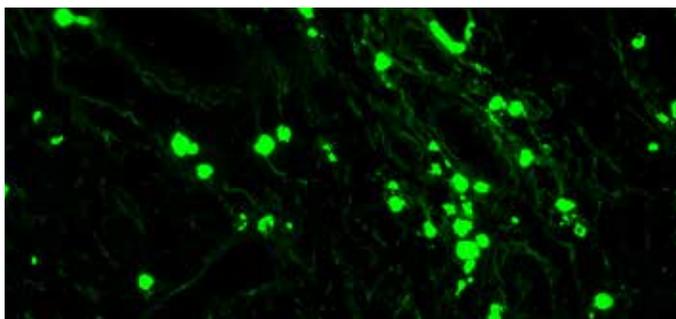
Formalin fixed paraffin embedded human Placenta stained with Fibrinogen-CF488 (FLC216).

**Immunogen:** IgG fraction from antisera obtained by ammonium sulfate precipitation and DEAE-Sephacel ion-exchange chromatography.

**Specificity:** This MAb is specific to Fibrinogen. Fibrinogen is a protein, a coagulation factor (factor I) that is essential for blood clot formation. Fibrinogen is also one of several blood factors that are called acute phase reactants. Blood levels of fibrinogen along with other acute phase reactants rise sharply with conditions causing acute tissue inflammation or damage. Conjugated to CF<sup>TM</sup>488, it shows unrivaled near-infrared dye to give less non-specific stainings.

## Cocktail IgA+IgG+IgM CF<sup>TM</sup>488-Conjugated Antibody

Catalog No.: FLC212

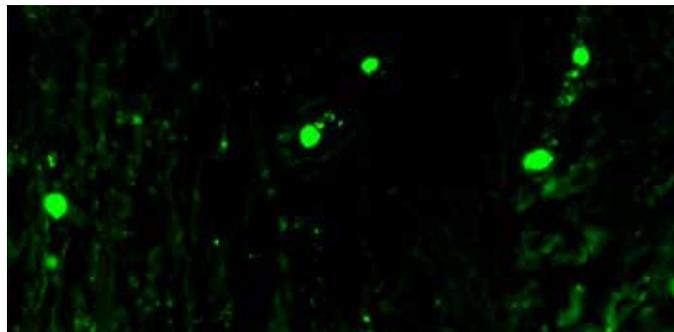


Formalin fixed paraffin embedded human tonsil stained with Cocktail IgA,G,M-CF488 (FLC212).

**Specificity:** This cocktail is identified to heavy chain of IgA, IgG and IgM. This novel cocktail conjugated to CF<sup>TM</sup>488 gives less non-specific binding and less red spill-over than traditional rhodamine chemistry.

## IgA CF<sup>TM</sup>488-Conjugated Antibody

Catalog No.: FLC207



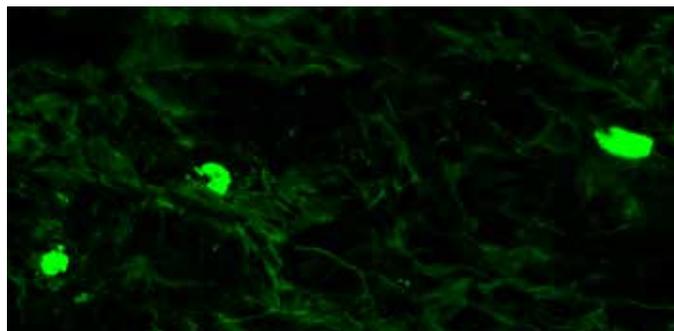
Formalin fixed paraffin embedded human tonsil stained with IgA-CF488 (FLC209).

**Immunogen:** Purified human alpha heavy chain.

**Specificity:** Immunoglobulin A (IgA) is the main protein of the mucosal immune system. It is generated by B-cells in gut-associated lymphoid tissues. Antibodies conjugated to CF<sup>TM</sup>488 resist photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies.

## IgG CF<sup>TM</sup>488-Conjugated Antibody

Catalog No.: FLC208



Formalin fixed paraffin embedded human tonsil stained with IgG-CF488 (FLC208).

**Immunogen:** Purified human alpha heavy chain.

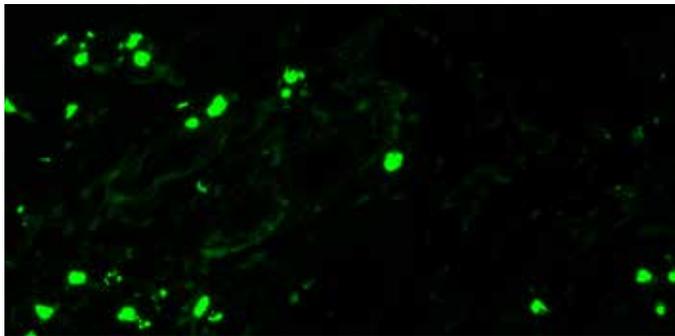
**Specificity:** This MAb is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Demonstration of clonality in lymphoid infiltrates indicates that the infiltrate is clonal and therefore malignant Immunogen. CF<sup>TM</sup>488 conjugated antibodies give better resolution in microscopy compared to synthetic dyes.

DBS CF488<sup>TM</sup> Fluorescein  
Isothiocyanate (FITC)  
Conjugated Antibodies

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**IgM CF™ 488-Conjugated Antibody**

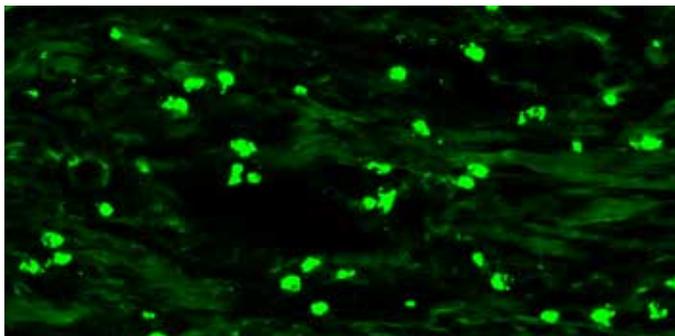
Catalog No.: FLC209

*Formalin fixed paraffin embedded human tonsil stained with IgM-CF488 FITC (FLC207).*

**Specificity:** This MAb is useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Conjugated to CF™488, it shows unrivaled near-infrared dye to give less non-specific staining.

**Kappa CF™ 488-Conjugated Antibody**

Catalog No.: FLC213

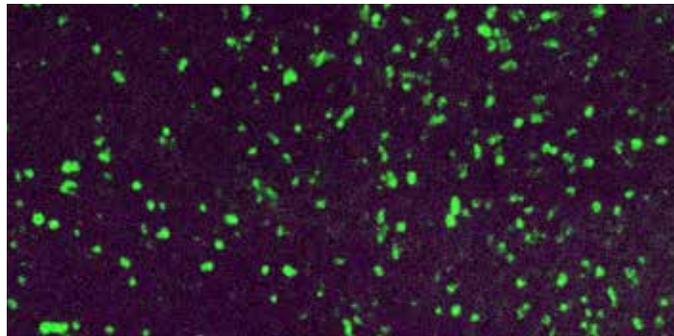
*Formalin fixed paraffin embedded human tonsil stained with Kappa-CF488 FITC (FLC213).*

**Immunogen:** Recombinant full length human IGKC; Immunoglobulin KM.

**Specificity:** This antibody reacts with B cell follicles in human lymphoid tissues. The mantle zones give a mosaic pattern, while the germinal centers show a coarse meshwork pattern of staining. This antibody stains free as well as bound kappa light chains. CF™488 conjugated antibodies give better resolution in microscopy compared to synthetic dyes.

**Lambda Light Chain****CF™ 488-Conjugated Antibody**

Catalog No.: FLC214

*Formalin fixed paraffin embedded human tonsil stained with Lambda-CF488 (FLC214).*

**Immunogen:** Purified human IgG.

**Specificity:** This antibody recognizes lambda light chains of human immunoglobulins, which may be useful in the identification of leukemias, plasmacytomas, and certain non-Hodgkin's lymphomas. Conjugated to CF™488, it can resist photobleaching for a longer period of time compared to common fluorescent-conjugated antibodies.

DBS CF488™ Fluorescein  
Isothiocyanate (FITC)  
Conjugated Antibodies

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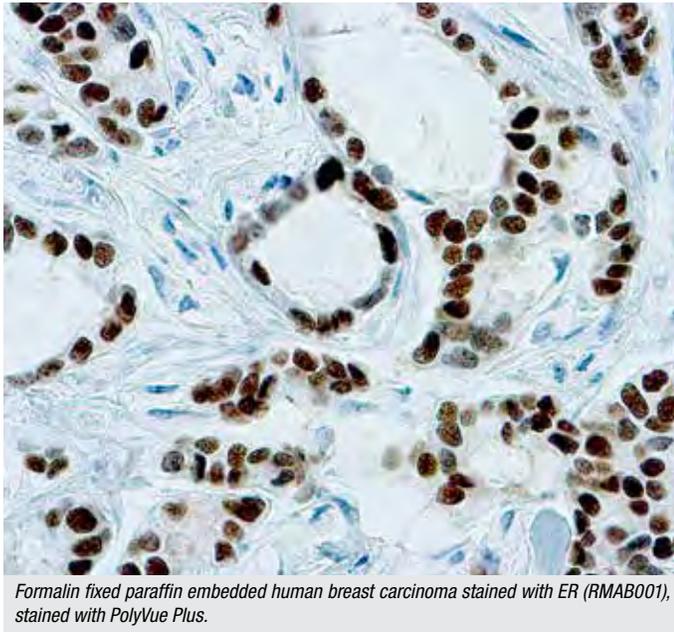


# PolyVue Plus™

## Two Step Detection System

Highly Sensitive. Exceptional Detection System.

Diagnostic BioSystems' PolyVue Plus is a highly sensitive, biotin-free immunostaining detection system formulated to simultaneously detect mouse as well as rabbit antibodies. PolyVue Plus employs an enhancer reagent with the polymeric enzyme-linked anti-rabbit and anti-mouse immunoglobulins for two-step detection, yielding higher sensitivity while maintaining the extremely clean background. The enhanced sensitivity of PolyVue Plus enables superior detection of antibodies at lower concentration or weaker signals.



Formalin fixed paraffin embedded human breast carcinoma stained with ER (RMAB001), stained with PolyVue Plus.

### PolyVue Plus™ Mouse/Rabbit HRP/DAB Detection System



<b>Catalog No :</b>	<b>PVP25D</b>	<b>25 tests</b>
	<b>PVP100D</b>	<b>100 tests</b>
	<b>PVP250D</b>	<b>250 tests</b>
	<b>PVP1000D</b>	<b>1000 tests</b>

The PolyVue Plus Mouse/Rabbit HRP/DAB Detection System is a non-biotin, two-step detection system suitable for labeling antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The PolyVue Plus Detection System may also be used with blood smears, cytosmears, and cell preparations. This system has been developed by directly labeling immunoglobulins with enzymes using a proprietary tandem hyperlabelling technology. This ensures consistent and reproducible immunostaining for all types of nuclear, cytoplasmic and membrane antigens in different types of tissues with significantly lower background than detection systems using biotin and avidin conjugates.

**Kit Contents:** Tissue Primer, Background Blocker, PolyVue Plus Mouse/Rabbit HRPEnhancer, PolyVue Plus Mouse/Rabbit HRPLabel, Stable DAB Plus Buffer, Stable DAB Plus Chromogen, and an empty mixing bottle.

### Advantages of PolyVue Plus™ Over Conventional Detection Systems:

- High sensitivity
- High specificity
- Clean background
- Highly reproducible staining
- Suitable for manual as well as automated stainers
- Shorter incubation times for detection reagents

# UnoVue Plus™ One Step Detection System

Quick. Consistent. Reproducible.

Diagnostic BioSystems is committed to providing immunohistochemistry solutions at an affordable cost. Experience greater efficiency over a broad spectrum of antibodies.

## UnoVue Plus™



### Mouse/Rabbit AP/PermaRed Detection System

**Catalog No.:** UVP25AR    25 tests  
UVP100AR    100 tests  
UVP1000AR    1000 tests

The UnoVue Plus Mouse/Rabbit AP/PermaRed Detection System is a non-biotin, one-step Mouse/Rabbit polymer detection system suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The UnoVue Plus Detection System may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** Anti-Mouse/Rabbit AP Polymer, PermaRed AutoPlus Buffer, and PermaRed AutoPlus Chromogen.

## UnoVue Plus™



### Mouse HRP/DAB Detection System

**Catalog No.:** UM100PD    100 tests

The UnoVue Plus Mouse HRP/DAB Detection System is a polymer-based 1-step horseradish peroxidase-labeled detection system for immunohistochemistry. This kit can detect mouse IgG and IgM antibodies, with significantly lower background than biotin/avidin detection systems. The Mouse UnoVue Plus HRP/DAB Detection System can be used for manual staining or with any automated staining instrument. The working solution of Stable DAB/Plus is stable for a week, offering convenience and cost savings due to less hazardous waste generation. This species-specific detection system is particularly useful for multiplex immunohistochemical staining assays.

**Kit Contents:** Peroxidase Block, Anti-Mouse HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, and an empty mixing bottle for Stable DAB/Plus.

## UnoVue Plus™



### Mouse/Rabbit HRP/DAB Detection System

**Catalog No.:** UMR100PD    100 tests  
UMR1000PD    1000 tests

The UnoVue Plus Mouse/Rabbit HRP/DAB Detection System is a polymer-based 1-step horseradish peroxidase-labeled detection system for immunohistochemistry. These reagents detect antibodies raised in mouse and rabbit, simultaneously, with significantly lower background than biotin/avidin detection systems. This kit can detect mouse IgG, IgM and rabbit primary antibodies, both monoclonal and polyclonal. Reagents can be used for manual staining or with any automated staining platform. The working solution of Stable DAB/Plus is stable for a week, offering convenience and cost savings due to less hazardous waste generation.

**Kit Contents:** Peroxidase Block, Anti-Mouse/Rabbit HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, and an empty mixing bottle for Stable DAB/Plus.

## UnoVue Plus™



### Mouse on Mouse (MOM) HRP/DAB Detection System

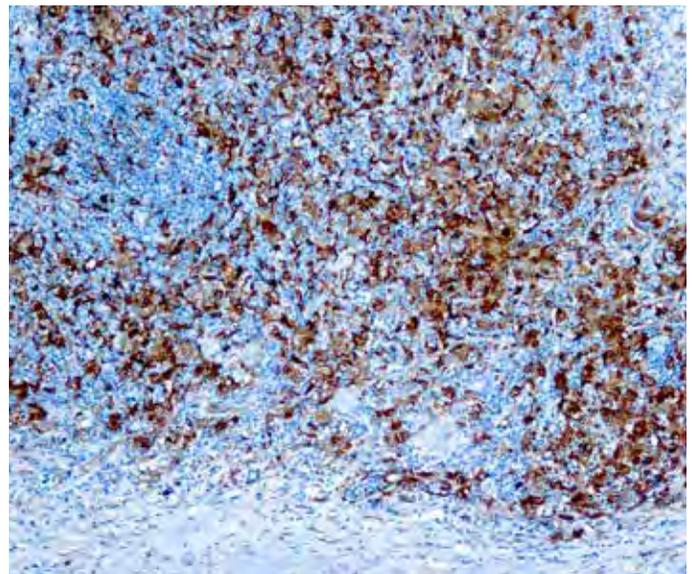
**Catalog No.:** MMU100PD    100 Tests

The UnoVue Plus Mouse on Mouse (MOM) HRP/DAB Detection System is a non-biotin, one-step detection system suitable for detecting mouse antigens on mouse tissue sections. The UnoVue Plus Detection System may be used with formalin-fixed paraffin embedded and cryostat sections, as well as blood smears, cytosmears, and cell preparations.

**Kit Contents:** Tissue Primer, Mouse on Mouse (MOM) Blocking Reagent, Mouse UnoVue Plus HRP Polymer, Stable DAB/Plus Buffer, Stable DAB/Plus Chromogen, Empty mixing bottle for Stable DAB/Plus.

# UnoVue Plus™ One Step Detection Components

UnoVue Plus One Step Detection components are developed by directly labelling immunoglobulins with enzymes using a proprietary tandem hyperlabeling technology. These non-biotin one-step detection components are highly suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and cryostat sections.



Formalin fixed paraffin human tonsil stained with Fascin-1 (Mob496), with UnoVue Plus.

### UnoVue Plus™ Mouse AP Detection Component

**Catalog No.:** MU-AP100    100 Tests  
 MU-AP1000    1000 Tests

UnoVue Mouse Plus AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Mouse AP Detection Component

### UnoVue Plus™ Mouse/Rabbit AP Detection Component

**Catalog No.:** MRU-AP100    100 Tests  
 MRU-AP1000    1000 Tests

UnoVue Plus Mouse/Rabbit AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and cryostat sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Mouse/Rabbit AP Detection Component

### UnoVue Plus™ Mouse HRP Detection Component

**Catalog No.:** MU-HRP100    100 Tests  
 MU-HRP1000    1000 Tests

UnoVue Plus Mouse HRP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Mouse HRP Detection Component

### UnoVue Plus™ Mouse/Rabbit HRP Detection Component

**Catalog No.:** MRU-HRP100    100 Tests  
 MRU-HRP1000    1000 Tests

UnoVue Plus Mouse/Rabbit HRP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus HRP Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Mouse/Rabbit HRP Detection Component

### UnoVue Plus™ Rabbit AP Detection Component

**Catalog No.:** RU-AP100    100 Tests  
 RU-AP1000    1000 Tests

UnoVue Plus Rabbit AP Detection Component is a non-biotin one-step detection reagent suitable for demonstrating antigens in formalin-fixed paraffin-embedded tissues and frozen sections. The UnoVue Plus Detection Component may also be used with blood smears, cytosmears, and cell preparations.

**Kit Contents:** UnoVue Plus Rabbit AP Detection Component

## Streptavidin Biotin Based Detection System

Diagnostic BioSystems offers immunostaining detection systems based on streptavidin/biotin technology. We offer convenient broad spectrum kits to detect both mouse and rabbit primary antibodies, and are available in ready-to-use formats.

#### Ready-to-Use Kits Components

KIT	TEST SIZE	CATALOG NO.
Peroxidase Mouse & Rabbit Kit (DAB Liquid)	1000 tests/100 tests	KP500L/KP50L
Peroxidase Mouse & Rabbit Kit*	1000 tests/100 tests	KP500/KP50
Alk. Phos. Mouse & Rabbit Kit (Fast Red)	1000 tests/100 tests	KA500F/KA50F
Alk. Phos. Mouse & Rabbit Staining Kit*	1000 tests/100 tests	KA500/KA50

KIT COMPONENT	VOLUME	CATALOG NO.
Mouse & Rabbit Link	100ml	M006
HRP Label	100ml	M008
ALP Label	100ml	M010

\* These kits do not contain any substrate/chromogen

Diagnostic BioSystems

# Chromogens

New discoveries in the clinic are demanding more functionality from IHC. Diagnostic BioSystems offers novel proprietary chromogens in Brown, Red, Green, Yellow and Blue for easy to develop multistains in your own lab. Use of high-quality, novel chromogens results in robust staining, making results reproducible and trustworthy.

- High Quality Staining—Detect and diagnose with confidence
- Broad Applicability—Single and Multiplex IHC and ISH
- Versatile and High Performance Reagents—HRP and AP compatible, well suited for manual and automation

Diagnostic BioSystems provides chromogens with two commonly used enzyme labels:

**Horse Radish Peroxidase (HRP)**

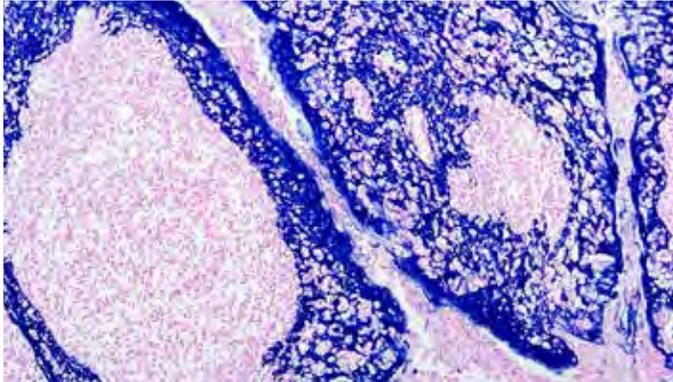
**Alkaline Phosphatase (AP)**

# Chromogens for AP

## PermaBlue Plus/AP

IVD

Catalog No.: **K058**      30ml Ready-to-Use  
                         **K058-110**      110ml Ready-to-Use



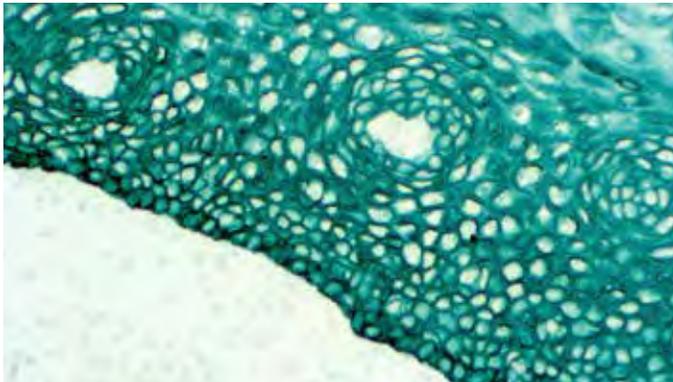
Formalin fixed paraffin embedded human tonsil stained with HMW CK antibody (PDM074) labeled with PermaBlue Plus/AP Chromogen (K058) produces a distinct bright blue color.

PermaBlue/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlue Plus/AP has been reformulated to increase stability of the working solution while producing a distinct bright blue color. PermaBlue Plus/AP is insoluble in alcohol and xylene substitutes; therefore sections can be dehydrated in alcohol, cleared in xylene substitute, and permanently mounted.

## PermaGreen Plus/AP

IVD

Catalog No.: **K059**      30ml Ready-to-Use  
                         **K059-110**      110ml Ready-to-Use



Formalin fixed paraffin embedded human tonsil stained with HMW CK antibody (PDM074) labeled with PermaGreen Plus/AP Chromogen (K059) produces a strong green color.

PermaGreen Plus/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaGreen Plus/AP has been modified to increase staining intensity, producing a strong green color that is insoluble in alcohol and xylene substitutes; therefore sections can be dehydrated in alcohol, cleared in a xylene substitute, and permanently mounted.

## PermaRed/AP

IVD

(Alcohol & Xylene Compatible)

Catalog No.: **K049**      30ml Ready-to-Use  
                         **K049-110**      110ml Ready-to-Use

PermaRed/AP is a substrate chromogen system for use with alkaline phosphatase (AP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaRed/AP produces a brilliant dark red color. PermaRed/AP is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

## PermaRed/AP-Auto

IVD

For Use on Automated Staining Platforms

Catalog No.: **K049-Auto**      30ml Ready-to-Use  
                         **K049-Auto-110**      110ml Ready-to-Use

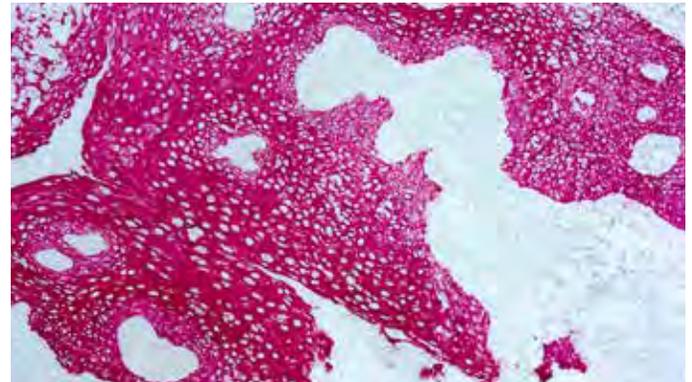
PermaRed/AP-Auto produces a red color, ranging from pink to brilliant dark red, depending on the signal intensity. It is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

PermaRed/AP-Auto has been formulated for on-slide mixing. The instrument should be programmed to apply the substrate-buffer to the slide followed by application of the chromogen reagent. The substrate-buffer and chromogen components are stable in their separate formats. They can be loaded into the reagent rack at the beginning of the staining run with the other reagents, for walk away convenience.

## PermaRed/AP-AutoPlus

IVD

Catalog No.: **K057-AutoPlus**      30ml Ready-to-Use  
                         **K057-AutoPlus-110**      110ml Ready-to-Use



Formalin fixed paraffin embedded squamous cell carcinoma human tissue stained with CK 5/6 antibody (Mob362) labeled with PermaRed AutoPlus (K057) produces a brilliant red color.

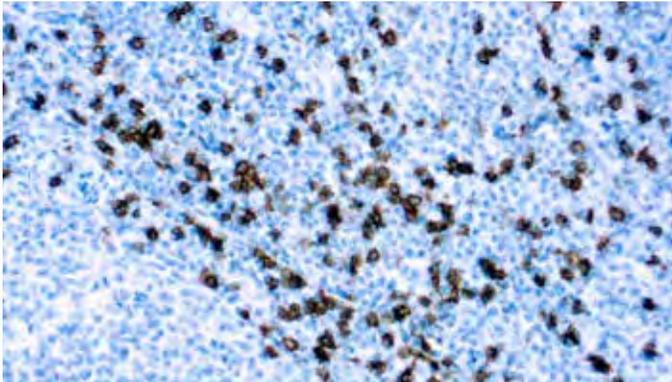
PermaRed/AP-Auto/Plus produces a red color, ranging from pink to brilliant dark red, depending on the signal intensity. It is insoluble in organic solvents; therefore sections can be dehydrated in alcohol, cleared in xylene (or a xylene-substitute), and permanently mounted.

# Chromogens for HRP

## DAB Auto

Catalog No.: **K081-AUTO**      30ml Ready-to-Use  
**K081-AUTO-110**      110ml Ready-to-Use

IVD



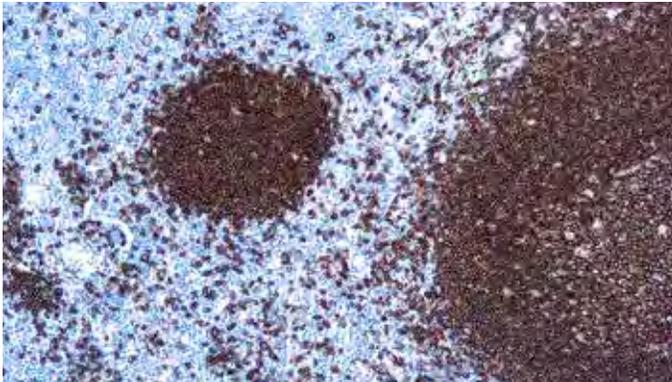
Formalin fixed paraffin embedded human tonsil stained with CD8 and labeled with DAB Auto (K081).

DAB, a widely used chromogen for immunoperoxidase staining, is well accepted among pathologists because of its high sensitivity and cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated, cleared, and mounted for permanent record keeping. DAB Auto is more sensitive than traditional DAB and it is easier to prepare. Labs can prepare the volume they need, resulting in less wastage of reagents. It is ideal for automated stainers with on-board mixing capabilities.

## High Contrast DAB

Catalog No.: **K055**      200ml Ready-to-Use

IVD



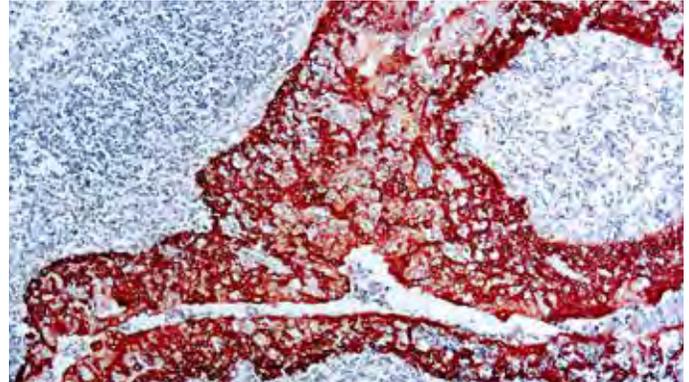
Formalin fixed paraffin embedded human tonsil stained with CD20 antibody (PDM004) labeled with High Contrast DAB (K055) produces a dark chocolate brown color.

DAB, is a widely used chromogen for immunoperoxidase staining, and is well accepted among pathologists because of its increased sensitivity and decreased background when compared to amino ethylcarbazole (AEC). Specimens stained with DAB can be dehydrated, cleared, and permanently mounted. High Contrast DAB is more sensitive and stable than traditional working DAB solutions.

## Mono AEC/Plus

Catalog No.: **K050**      30ml Ready-to-Use  
**K050-110**      110ml Ready-to-Use

IVD



Formalin fixed paraffin embedded human tonsil stained with high molecular weight Cytokeratin H.M.W and labeled with Mono AEC/Plus (K050).

Mono AEC/Plus is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). AEC produces a red colored end product, yielding strong contrast when combined with a blue hematoxylin counterstain. AEC has been well accepted among histotechnologists because it is less chemically hazardous than DAB. Specimens stained using Mono AEC/Plus cannot be dehydrated in ethanol and must be mounted in an aqueous-based mounting medium such as CC/Mount (cat. K002).

## PermaBlack/HRP

Catalog No.: **K062**      30ml Ready-to-Use  
**K062-110**      110ml Ready-to-Use

IVD



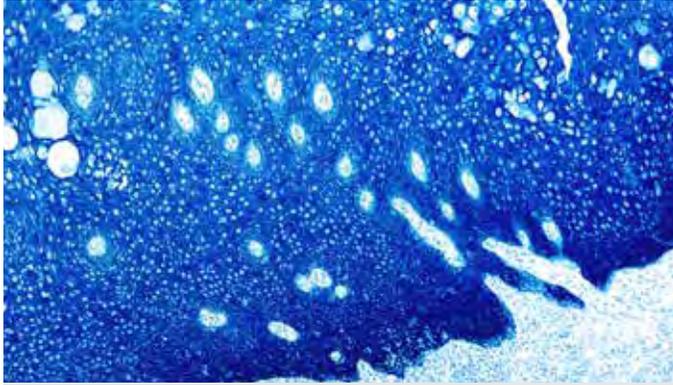
Formalin fixed paraffin embedded human adenocarcinoma stained with Cytokeratin H.M.W and labeled with PermaBlack/HRP (K062).

PermaBlack/HRP is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlack/HRP can be permanently mounted to produce a sharply contrasting ebony black color that can be easily distinguished from other stains.

**PermaBlue/HRP**

IVD

Catalog No.: **K063**      **30ml Ready-to-Use**  
**K063-110**      **110ml Ready-to-Use**



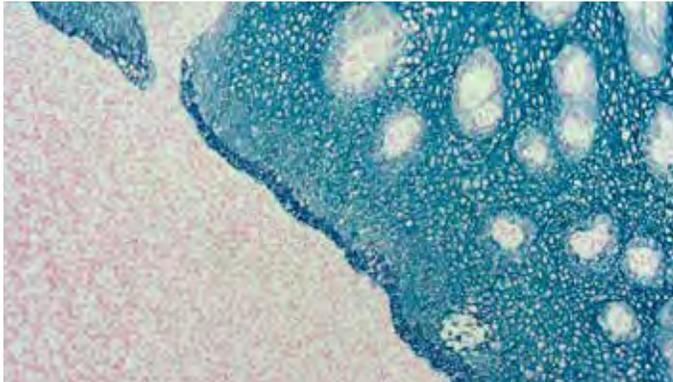
*Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W and labeled with PermaBlue/HRP(K063).*

PermaBlue/HRP is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaBlue/HRP can be permanently mounted to produce a strong azure blue color that can be easily distinguished from other stains.

**PermaGreen/HRP**

IVD

Catalog No.: **K074**      **30ml Ready-to-Use**  
**K074-110**      **110ml Ready-to-Use**



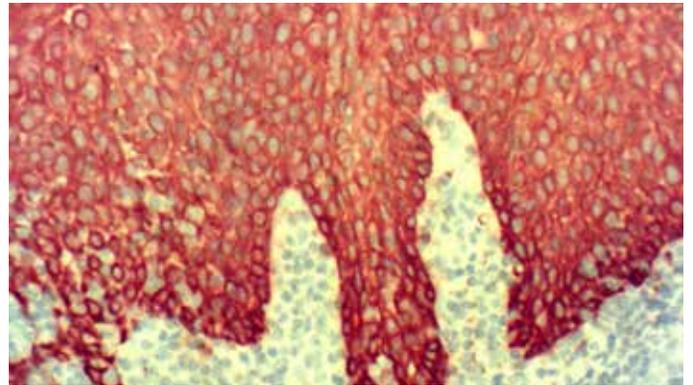
*Formalin fixed paraffin embedded human tonsil stained with PermaGreen/HRP.*

PermaGreen/HRP is a substrate-chromogen system designed to be used for either IHC or ISH when utilizing horseradish peroxidase. PermaGreen/HRP produces a distinct bright green color that can easily be distinguished from other stains.

**PermaRed/HRP**

IVD

Catalog No.: **K075**      **30ml Ready-to-Use**  
**K075-110**      **110ml Ready-to-Use**



*Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W and labeled with PermaRed/HRP (K075).*

PermaRed/HRP is a substrate-chromogen system designed to be used for either IHC or ISH when utilizing horseradish peroxidase. PermaRed/HRP produces a distinct brick red stain that can easily be distinguished from other stains.

**PermaYellow/HRP**

IVD

Catalog No.: **K060**      **30ml Ready-to-Use**  
**K060-110**      **110ml Ready-to-Use**



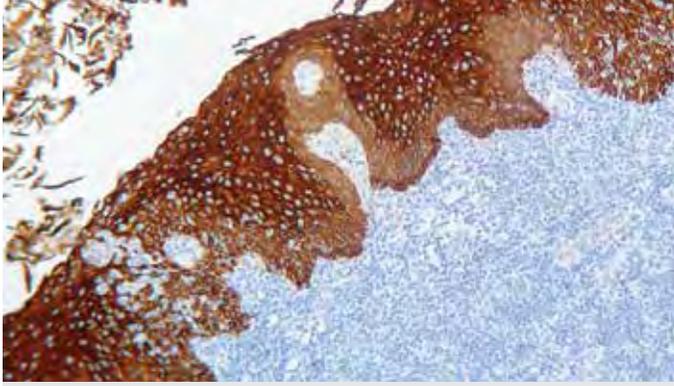
*Formalin fixed paraffin embedded human tonsil stained with Cytokeratin H.M.W labeled with PermaYellow/HRP(K060).*

PermaYellow/HRP is a substrate chromogen system for use with horseradish peroxidase (HRP) detection in immunohistochemistry (IHC) or in situ hybridizations (ISH). PermaYellow/HRP produces a distinct bright yellow that can easily be distinguished from other stains.

Stable DAB/Plus  
Catalog No.: K047

200ml Ready-to-Use

IVD



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin 5/14 labeled with Stable DAB/Plus (K047).

DAB, a widely used chromogen for immunoperoxidase staining, is well accepted among pathologists because of its high sensitivity and cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated, cleared, and mounted for permanent record keeping. Stable DAB/Plus is more sensitive and stable than traditional working DAB solutions, which reduces hazardous waste generation.



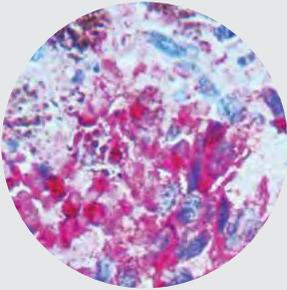
## Diagnostic BioSystems' Chromogens

are available in a wide array of colors for both HRP and AP.

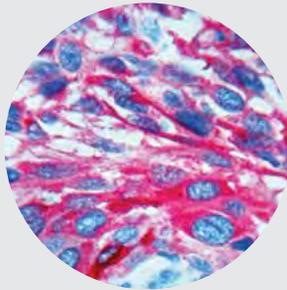
Visit us at [dbiosys.com](http://dbiosys.com)

Chromogens

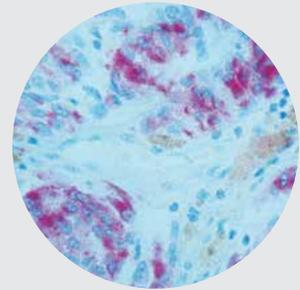
## Improving Dermatologic Diagnosis with PermaRed/AP and PermaRed/HRP



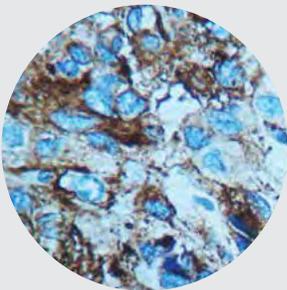
HMB45 melanoma utilizing PermaRed/AP



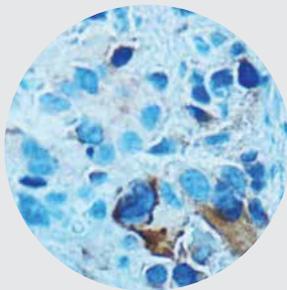
MART1 melanoma utilizing PermaRed/HRP



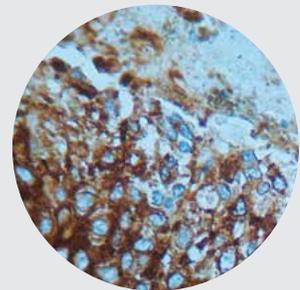
Pan Melanoma Cocktail on melanoma utilizing PermaRed/AP



HMB45 melanoma utilizing Stable DAB/Plus



MART1 melanoma utilizing Stable DAB/Plus



Pan Melanoma Cocktail on melanoma utilizing Stable DAB/Plus

# Antigen Retrieval

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high. Epitope retrieval techniques fall into two main categories, enzyme induced epitope recovery and heat induced epitope recovery.

Diagnostic BioSystems offers products for both enzyme and heat induced epitope retrieval.

## 10X Antigen Retrieval Buffer High, pH 10.0

IVD

**Catalog No.: K044 500ml Concentrated**

10X Antigen Retrieval Buffer High, pH 10.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Citrate Buffer for

IVD

### Heat Induced Epitope Recovery, pH 6.0

**Catalog No.: K035 500ml Concentrated**

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 6.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Citrate Buffer for

IVD

### Heat Induced Epitope Recovery, pH 7.0

**Catalog No.: K036 500ml Concentrated**

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 7.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Citrate Buffer for

IVD

### Heat Induced Epitope Recovery, pH 8.0

**Catalog No.: K037 500ml Concentrated**

10X Citrate Buffer For Heat Induced Epitope Recovery, pH 8.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X EDTA Buffer for

IVD

### Heat Induced Epitope Recovery, pH 8.0

**Catalog No.: K038 500ml Concentrated**

10X EDTA Buffer For Heat Induced Epitope Recovery, pH 8.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## 10X Tris-EDTA Buffer For

IVD

### Heat Induced Epitope Recovery, pH 9.0

**Catalog No.: K043 500ml Concentrated**

10X Tris-EDTA Buffer For Heat Induced Epitope Recovery, pH 9.0 is designed for use during the heat induced epitope retrieval (HIER) step prior to immunohistochemistry on formalin-fixed paraffin embedded tissue sections. The use of this buffer in combination with heat (often by microwave, water bath, or pressure cooker) has been shown to restore the antigenicity of proteins modified during the formalin fixation of tissue. This buffer is supplied as a 10X stock solution.

## HistoZyme

IVD

**Catalog No.: K046 15ml Ready-to-Use  
K046-50 50ml Ready-to-Use**

HistoZyme is a proteolytic enzyme solution that results in superior staining over traditionally used enzyme pretreatments, such as pepsin and trypsin. HistoZyme requires only a brief incubation at room temperature. Performing antigen recovery with HistoZyme, will allow you to dilute the primary antibody 5 to 10 fold further and achieve optimal staining.

## Pepsin Solution

IVD

**Catalog No.: K009 50ml Ready-to-Use**

Pepsin is used for proteolytic digestion of formalin-fixed paraffin-embedded (FFPE) tissue sections prior to application of antibodies. In immunohistochemistry (IHC), most commonly used fixatives such as formalin, mask tissue antigens (cellular, membrane, and nuclear) by their intrinsic crosslinking. This masking results in poor or no staining in IHC. Pepsin digestion of FFPE tissue sections improves accessibility of antibodies to tissue antigens.



Fully Automated  
High Quality  
Efficient  
Reliable



### Proteinase K 25X

IVD

Catalog No.: K030 2ml Concentrated

Proteinase K is specifically formulated to achieve proteolytic digestion of formalin fixed, paraffin embedded tissue sections prior to performing in situ hybridization procedures.

### QuatroSol I 10X Citrate Buffer

IVD

Catalog No.: K085 500ml Concentrated

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high.

Buffer performs four steps:

1. Deparaffinitation
2. Rehydration
3. Antigen retrieval
4. Blocks endogenous peroxidase and alkaline phosphatase simultaneously it can eliminate the use of alcohol and xyelene in deparaffinization process. It is cost effective and less hazardous.

### QuatroSol II 10X Tris EDTA Buffer

IVD

Catalog No.: K086 500ml Concentrated

The Antigen Retrieval technique is a novel method for the recovery of antigens from formalin-fixed, paraffin-embedded tissue. It consists of heating tissue sections in the presence of an antigen retrieval solution. The quality of the staining result is largely dependent on strict adherence to the antigen retrieval protocol. If the antigens are incompletely retrieved, the staining is light and the background may be high.

Buffer performs four steps:

1. Deparaffinitation
2. Rehydration
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4. Blocks endogenous peroxidase and alkaline phosphatase simultaneously it can eliminate the use of alcohol and xyelene in deparaffinization process. It is cost effective and less hazardous.

Diagnostic BioSystems

# Montage Opus™ Antigen Retrieval SYSTEM

Diagnostic BioSystems offers a compact and efficient platform for Heat Induced Epitope Retrieval (HIER). Heat induced epitope retrieval pretreatment is a common practice in immunohistochemistry to improve the quality of staining by modifying the molecular conformation of 'target' proteins through exposure of slide-mounted tissue specimen to a heated buffer solution. Appropriate use of heat and pressure along with suitable buffer solutions is of extreme importance for consistent immunohistochemistry staining.

## DBS Montage Opus SYSTEM Benefits

- Ensures crisp and clean staining
- Provides consistent and reliable results
- Increases staining efficiency
- Offers 72 Slide Staining Capacity

## DBS Montage Opus SYSTEM— What is Included

Each Montage Opus Unit includes:

- 3-Plastic Slide Dishes
- 3-24 Slide Rack
- 1-Metal Stand
- 1-Montage 10X EDTA AR Solution (Cat No: K038-500AN)
- 1-Montage 10X Citrate AR Solution (Cat No: K035-500AN)
- 2-Temperature Indicating Strips (Cat No: AR360-10TS)



## DBS Montage Opus SYSTEM Specifications

Color	Black
Electrical	120V
Slide Capacity	72 slides / run

### ORDERING INFORMATION

**PRODUCT NAME**

Montage Opus Antigen Retrieval SYSTEM

**CATALOG NO.**

AR360

Antigen Retrieval

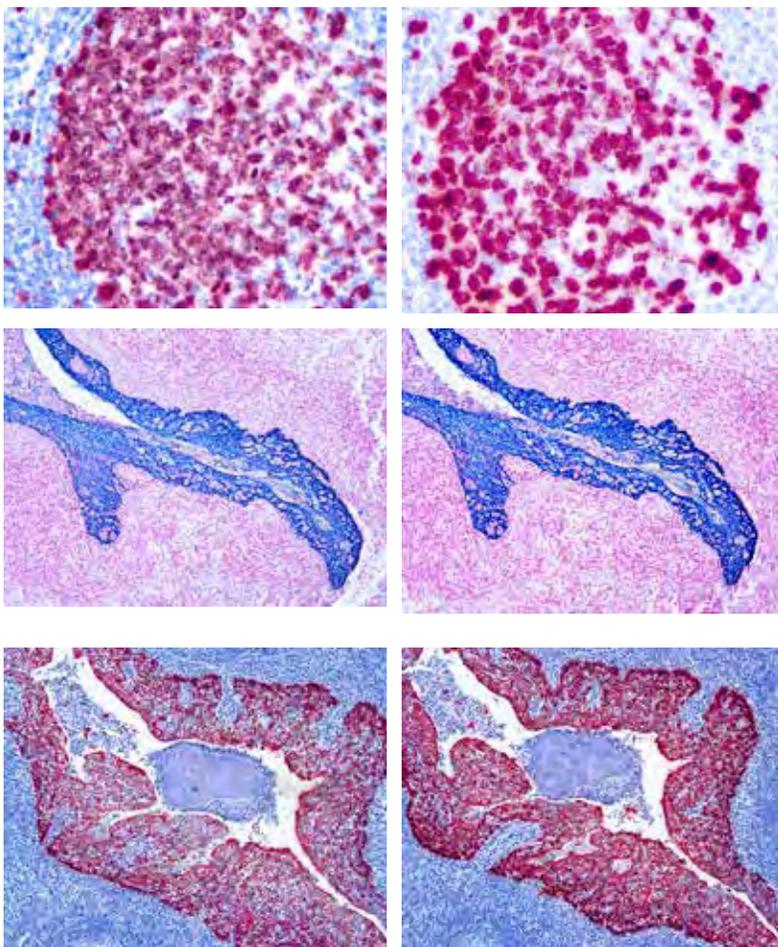
# ImmunoHisto-Sealer™

This product is designed for tissue specimens stained with peroxidase, alkaline phosphatase-based systems and various chromogens. After treating with ImmunoHisto-Sealer™, alcohol and Xylene soluble chromogens can be mounted in Permanent Mounting Media.

## ImmunoHisto-Sealer™

For In Vitro Diagnostic Use

Patented Technology: US 10,495,553B2



Without ImmunoHisto-Sealer™

With ImmunoHisto-Sealer™

## Advantages of ImmunoHisto-Sealer™

- Improves the tissue morphology
- Improves your stain over an extended period of time
- Applied to the stained section, specimens are permanently mounted without chromogens fading
- Saves hands on time when mounting slides
- Avoids use of toxic chemicals such as xylene and eliminates accumulation of hazardous waste
- Three-year storage

## ORDERING INFORMATION

PRODUCT NAME  
ImmunoHisto-Sealer™

CATALOG NO.  
K076

# Ancillary Reagents

## Alkaline Phosphatase Enhancer

IVD

**Catalog No.:** K011      **250ml Ready-to-Use**

Alkaline phosphatase, an enzyme derived from bovine intestinal mucosa, is often used as a label for in situ hybridization and immunohistochemistry. Detection of this enzyme requires the generation of an insoluble colored reaction end product. DBS has introduced a new stable solution to increase the signal generated by alkaline phosphatase several fold.

## Broad Spectrum Negative Control

IVD

**Catalog No.:** K053-06      **6ml Ready-to-Use**  
 K053-25      **25ml Ready-to-Use**  
 K053-100      **100ml Ready-to-Use**

Negative controls are used to determine the specificity of an antibody. No staining should be observed when the primary antibody is omitted. This product is specifically designed to work with rabbit, mouse and goat antibodies. The Broad Spectrum Negative Control has been titrated to work with Polymer-based Secondary Systems in manual and automated IHC platforms.

## DAB Away Kit

IVD

**Catalog No.:** K072-500AN      **500ml**

Montage DAB Away removes diaminobenzidine (DAB) stains and precipitate from surfaces. Contamination with DAB residue can be a problem that may affect staining quality or automated immunohistochemistry stainers. Bleach will only reduce the color intensity of DAB stains, whereas, DAB Away removes the residual DAB stain that may clog instrument probes and tubing. This kit can also be used to clean glassware used in the lab that has been exposed to DAB and has retained DAB stains even after normal cleaning.

## DP3 for One-Step Deparaffinization

IVD

**Catalog No.:** K082      **500ml**

The DP3 reagent is used for deparaffinization of paraffin-embedded tissue sections. Deparaffinization is completed in a single step without the use of xylene or alcohol. After deparaffinization the tissue sections can be transferred directly into antigen retrieval solution.

## Elite PAP Pen

IVD

**Catalog No.:** K039      **1 Pen Each**

Elite PAP pen is a special marking pen that provides a thin film-like green-tinged hydrophobic barrier when a circle is drawn around a specimen on a slide. This water repellent barrier keeps staining reagents localized on the tissue sections, prevents mixing of reagents when differentially staining two sections on the same slide, and allows use of less reagents per section. Insoluble in alcohol and acetone, PAP Pen markings can be optionally removed with xylene after the staining procedure is complete.

## Elite Mini PAP Pen

IVD

**Catalog No.:** K042      **1 Pen Each**

Elite Mini PAP pen is a special marking pen that provides a thin film-like green-tinged hydrophobic barrier when a circle is drawn around a specimen on a slide. This water repellent barrier allows use of less reagents per section. Insoluble in alcohol and acetone, PAP Pen markings can be optionally removed with xylene after the staining procedure is complete. The Mini PAP pen is especially useful when working with multiple sections on a single slide because its tip is finer than the regular PAP pen.

## FITC Diluent

IVD

**Catalog No.:** FD001

This product can be used as a diluent to prepare primary antibodies conjugated to FITC. It can be used with any primary antibody irrespective of its source of origin. FITC Diluent is specifically designed to stabilize primary antibodies and reduce nonspecific background staining observed during immunostaining.

## Hematoxylin

IVD

**Catalog No.:** K056-100AN      **100ml**

Hematoxylin is a histological staining reagent suitable for visualization of nuclei in tissue sections.

## Primary Antibody Diluent

IVD

**(With Background Reducing Component)**

**Catalog No.:** K004      **250ml Ready-to-Use**

The Primary Antibody Diluent contains optimal concentrations of sodium chloride and detergents to prevent nonspecific binding and enable better penetration of primary antibodies. Primary Antibody Diluent is specifically designed for diluting primary antibodies for immunohistochemistry. Both, monoclonal and polyclonal antibodies can be diluted in this buffer.

## TissueBond™ Reagent

IVD

**Catalog No.:** K013      **7ml Ready-to-Use**

Proper tissue adhesion to the glass slides is critical in the immunostaining process. Improper adhesion of tissue sections can lead to poor quality staining or even loss of tissue sections during the process of immunostaining. White glue, albumen, chrome-gelatin and poly-L-lysine have been used as tissue adhesives; however, they can increase the background during the staining process. Since epitope recovery may require harsh treatment with proteolytic enzymes, microwave treatment or treatment with saponin etc., there is a need for a tissue adhesive which can irreversibly bind tissue sections to the glass without creating any background. Glass treated with TissueBond can be used for both paraffin as well as frozen tissue sections.

## Tween 20

IVD

**Catalog No.:** K067-125AN      **125ml**

Tween 20 is a detergent (surfactant) commonly added to buffers and reagents for immunohistochemistry. Its purpose is to decrease background staining and enhance reagent spreading in automated and manual procedures.

## Blockers

### Background Blocker

IVD

Catalog No.: K023 100ml Ready-to-Use

Background Blocker is a unique serum-free blocking solution used to reduce nonspecific background during immunostaining techniques. Background Blocker is a universal blocking agent, eliminating the need for matching species with the link antibody. This blocking reagent has been shown to be superior to serum-based blocking solutions. Background Blocker can be used for ELISA and Western blotting techniques as well as immunohistochemistry.

### Mouse on Mouse Blocking Reagent

IVD

Catalog No.: K065 10ml

Mouse on Mouse (MOM) Blocking Reagent is a unique serum-free blocking solution used to reduce nonspecific background staining from mouse antibodies. This blocking reagent has been shown to be more superior than serum-based blocking solutions.

### Peroxidase Block

IVD

Catalog No.: K033 50ml Ready-to-Use

Endogenous peroxidase activity has been observed in tissue sections during immunoperoxidase staining. If not properly suppressed, endogenous peroxidase can produce false signal as well as high background during the immunostaining. Treatment of tissue sections with Peroxidase Block prior to the application of primary antibody will suppress endogenous peroxidase activity.

### Tissue Primer

IVD

Catalog No.: K054 100ml

Tissue Primer is a universal enzyme blocking reagent to use in horse radish peroxidase (HRP) and alkaline phosphatase (AP) based immunohistochemical staining procedures done on paraffin tissue sections, frozen tissue sections and cell smears to suppress nonspecific staining due to endogenous enzyme activity.

## Chromogen Enhancers

### 20X DAB Enhancer

IVD

Catalog No.: K012 10ml Concentrated

DAB is a widely used chromogen for immunoperoxidase staining and immunoblotting. DAB gives cleaner background than aminoethylcarbazole (AEC). Specimens stained in DAB can be dehydrated in ethanol and cleared in xylene and can be mounted for permanent record keeping. Strength of signal generated during the immunostaining is the key to a good staining. The reagent is a stable liquid solution which increases the staining intensity of specimens stained with DAB several-fold, thereby increasing the efficiency of detection.

### ImmunoHisto-Sealer™

IVD

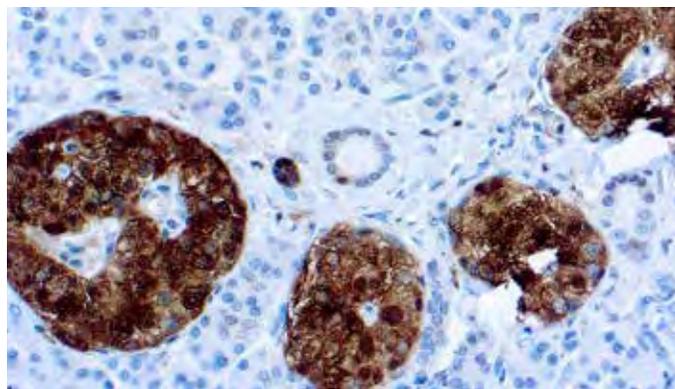
Catalog No.: K076 30ml

ImmunoHisto-Sealer is a preservation solution that acts as a sealant to improve tissue morphology and stain over an extended period of time. When applied to the stained section, specimens can be permanently mounted without chromogens fading. Additional benefits of the ImmunoHisto-Sealer™ include: saves hands on time when mounting slides, avoids the use of toxic chemicals such as xylene and eliminates accumulation of hazardous waste.

### Intensi/Fire

IVD

Catalog No.: K045 15ml Ready-to-Use



Formalin fixed paraffin embedded human tonsil stained with Cytokeratin labeled with DAB and enhanced using Intensi/Fire.

One of the hallmarks of successful IHC is the strength of the signal generated during immunostaining. DAB, widely used as a chromogen for immunoperoxidase staining, has been well accepted by pathologists due to its superior performance compared to amino ethylcarbazole (AEC). Tissue specimens stained with DAB show increased staining intensity when Intensi/Fire is applied. Only a brief incubation is required. Increased sensitivity of the detection system allows the cost-effective option of diluting the primary antibody 5 to 10 fold. Intensi/Fire increases the signal intensity without creating background staining.

## Diagnostic BioSystems Offers A Host Of Ancillaries

to provide solutions to your  
IHC staining challenges.

Visit us at [dbiosys.com](http://dbiosys.com)

## Buffers

### 10X Immuno Wash Buffer

IVD

**Catalog No.:** K005      **1 Liter Concentrated**

10X Immuno Wash Buffer works well for manual and automated immunohistochemistry applications as well as other laboratory procedures requiring a high quality TBS buffer with superior pH stability. The TBS contains surfactant and allows for reagents to spread more uniformly across tissue section on slides. It can also be used on an automated staining system.

### 40X Immuno Wash Buffer

IVD

**Catalog No.:** K080      **250 ml Concentrated**

40X Immuno Wash Buffer washes and removes excess reagents during immunostaining. It works well for manual and automated immunohistochemistry applications as well as other laboratory procedures requiring a high quality TBS buffer with superior pH stability. The TBS contains surfactant and allows for reagents to spread more uniformly across tissue section on slides.

### Phosphate Buffered Saline Tablets

IVD

**Catalog No.:** DMRE404-01      **100 each Tablets**

PBS buffer works well for manual and automated histopathology and immunohistochemistry (IHC) applications with the addition of a surfactant.

## Mounting Media

### CC/Mount™

IVD

#### Aqueous Permanent Mounting Medium

**Catalog No.:** K002      **30 ml Ready-to-Use**  
**K002-200      200ml Ready-to-Use**

CC/Mount is an aqueous mounting medium with a high refractive index. When applied to stained tissue sections, specimens can be permanently mounted without chromogens fading. The advantages of CC/Mount include: no coverslip, no exposure to organic fumes, permanent storage of slides and high resolution of tissue specimens. CC/Mount is compatible with chromogens like AEC, DAB, Fast Red, BCIP/NBT, BCIP/INT and fluorescent dyes like FITC and phycobiliproteins. The high pH ensures increased stability of fluorescence.

### Fluoromount™

IVD

**Catalog No.:** K024      **25ml Ready-to-Use**  
**K024-200      200ml Ready-to-Use**

Fluoromount is an innovative, aqueous-based mounting medium designed especially for the permanent preservation of fluorescent specimens. Fluoromount is to be used with tissue sections stained with a multitude of fluorescent dyes. This product is compatible with FITC, phycoerythrin, phycocyanin and allophycocyanin. It can also be used with other fluorescent markers such as Texas Red and rhodamine.

### Fluoromount/Plus™

IVD

**Catalog No.:** K048      **25ml Ready-to-Use**

Fluoromount/Plus is an innovative, aqueous-based mounting medium designed especially for the permanent preservation of fluorescent specimens. Fluoromount/Plus is to be used with tissue sections stained with a multitude of fluorescent dyes. This product is compatible with FITC, phycoerythrin, phycocyanin and allophycocyanin. It can also be used with other fluorescent markers such as Texas Red and rhodamine.



Antigen Retrieval Solutions



Mounting Media



Pens



Buffers

# Special Stains

Histology is the study and analysis of structure and function in biological tissues and cells. Specially formulated dyes and chemicals are used to give color to cellular tissue components for microscopic examination. Through this process diagnostic evaluations are made and patient therapies are determined.

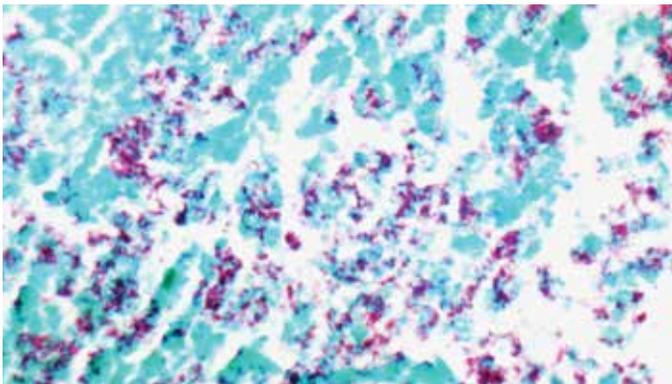
Diagnostic BioSystems offers Special Stains ranging from Acid-Fast Bacteria Stain Kit to Warthin-Starry Stain Kit. The reagents are packaged for optimal staining quality and are designed to be used right of the box for minimal set up time.

Each Diagnostic BioSystems Special Stain Kit has been quality assured and comes with complete instructions for use.

**FORMAT AND PACK SIZE:** Each kit has sufficient reagents for 100 tests.

**A.F.B.**  
Catalog No.: **KT001**

IVD

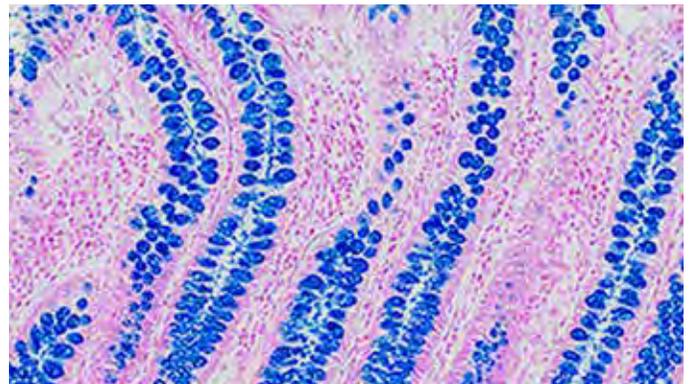


*Acid Fast Bacilli Lung infected with Acid Fast Bacteria (A.F.B) (KT001).*

This kit stains acid-fast bacteria and tubercle bacilli of *Mycobacterium* genus in paraffin tissue sections. Tubercle bacilli and other acid-fast bacteria stain bright red and the background stains light green.

**Alcian Blue, pH 2.5**  
Catalog No.: **KT003**

IVD

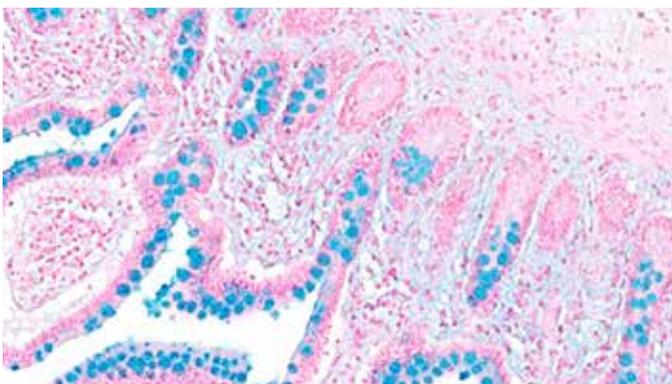


*Human Colon Stained with Alcian Blue (KT003).*

This kit stains acid mucins, carboxylated and sulfated mucosubstances (except strongly sulfated mucosubstances) in paraffin tissue sections. Acidic mucins, carboxylated and sulfated mucosubstances stain blue, while the nuclei stain pink to red and the cytoplasm and background stain pale pink.

**Alcian Blue, pH 1.0**  
Catalog No.: **KT002**

IVD

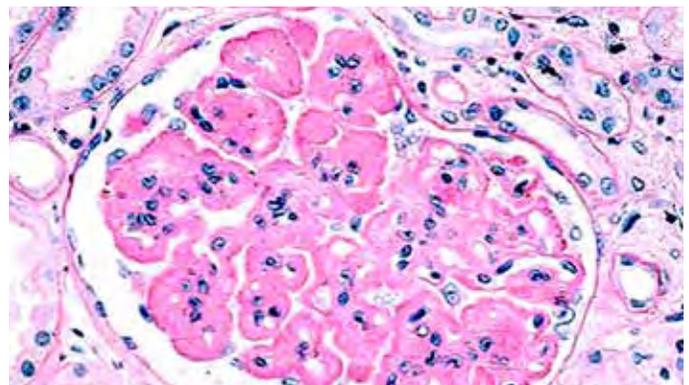


*Human colon stained with Alcian Blue (KT002).*

This kit stains strongly sulfated mucosubstances. Strongly sulfated mucosubstances stain blue in paraffin tissue sections, while the nuclei stain pink to red and the cytoplasm and background stain pale pink.

**Amyloid**  
Catalog No.: **KT008**

IVD



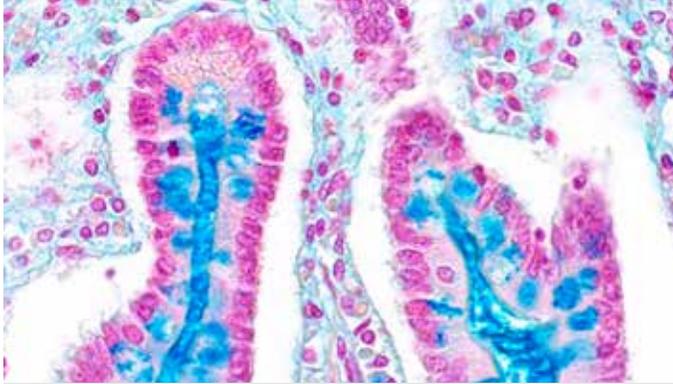
*Amyloidosis in Kidney stained with AMY-1 Kit (KT008).*

This kit stains amyloid deposits in paraffin tissue sections. The amyloids stain pale pink to red, while the nuclei stain blue.

**Colloidal Iron**

IVD

Catalog No.: KT007



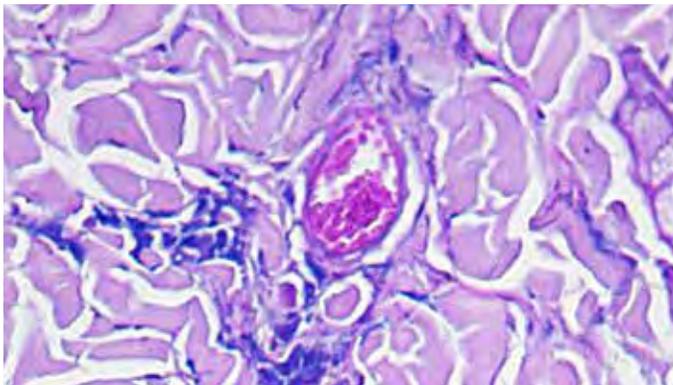
Human intestine stained with Colloidal Iron stain (KT007).

This kit stains acid mucopolysaccharides in paraffin tissue sections. The acid mucopolysaccharides stain bright blue, while collagen stains shades of red.

**Combined Eosinophil-Mast Cell**

IVD

Catalog No.: KT004



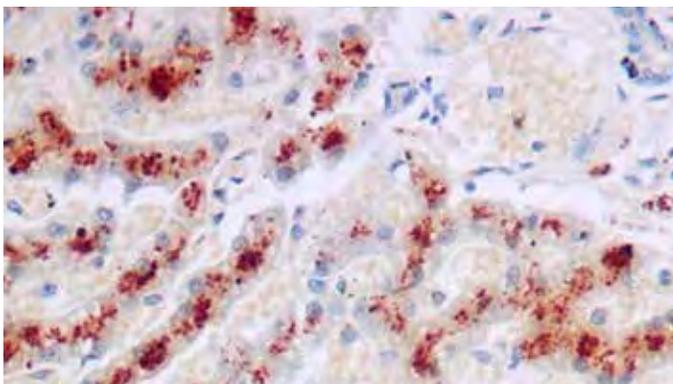
Combined Eosinophil-Mast Cell (KT004).

This kit stains eosinophils and mast cells simultaneously in paraffin tissue sections. Mast cells stain bright blue, while eosinophils stain bright red.

**Copper**

IVD

Catalog No.: KT033



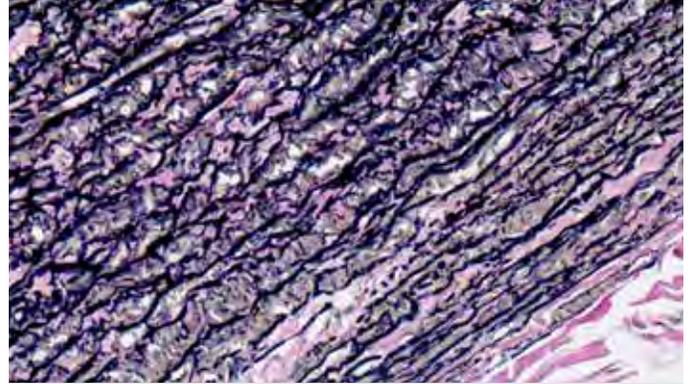
Copper Stain on copper deposits in Liver (KT033).

This kit stains copper deposits in paraffin tissue sections. The copper deposits stain light brown to red, while the nuclei stain blue.

**Elastic**

IVD

Catalog No.: KT012



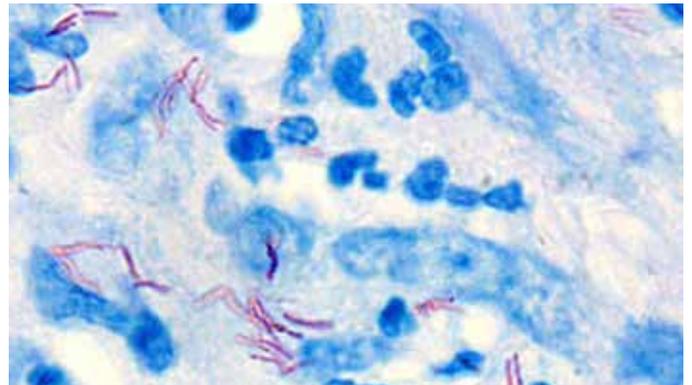
Human uterus stained with elastic stain (KT012).

This kit stains elastic fibers in paraffin tissue sections. The elastic fibers stain black and collagen stains red, while the other tissue stains yellow.

**Fite**

IVD

Catalog No.: KT013



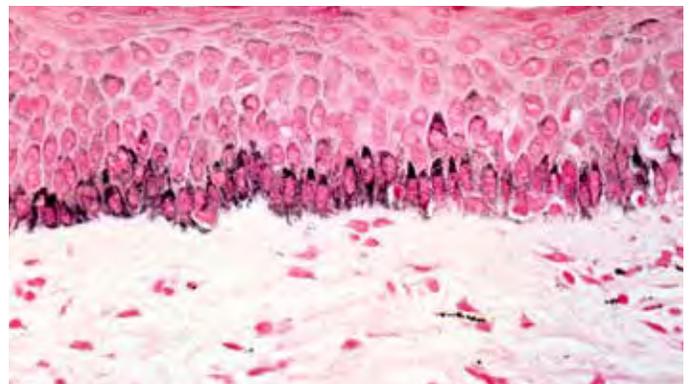
Human lung stained with Fite kit (KT013).

This kit stains Lepra bacillus in paraffin tissue sections. The Lepra bacillus stains red, while the background stains blue.

**Fontana-Masson**

IVD

Catalog No.: KT014



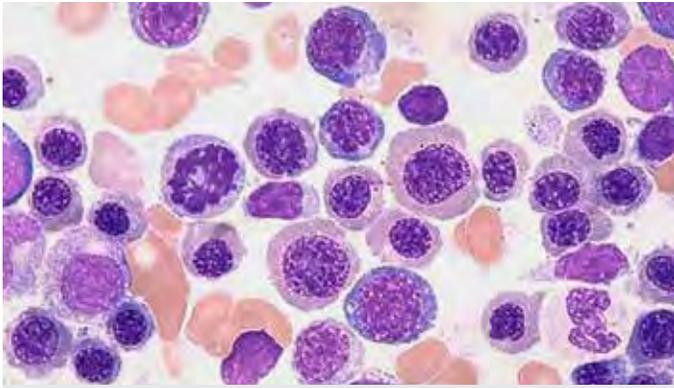
Human Melanoma stained with Fontana Mason Stain (KT014).

This kit stains argentaffin cells and melanin in paraffin tissue sections. The argentaffin cells and melanin granules stain brown to black, while the nuclei stain pink.

## Giemsa

IVD

Catalog No.: KT016



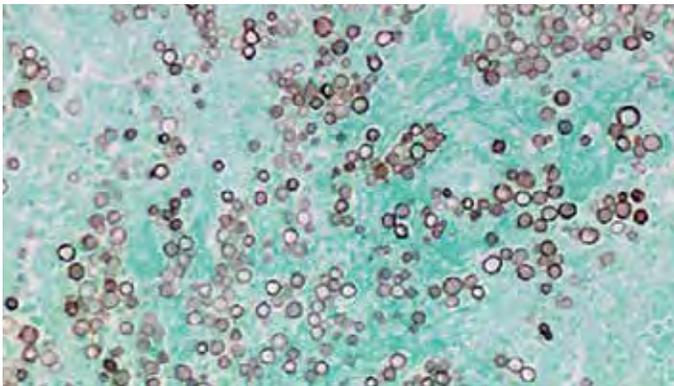
Human bone marrow stained with Giemsa kit (KT016).

This kit stains bone marrow cells, *Helicobacter pylori*, mast cells and certain microorganism in paraffin tissue sections. The erythrocytes stain gray, yellow or pink, *H. pylori* stain blue, mast cells stain dark blue with red granules, nuclei stain blue to violet and the cytoplasm stains light blue.

## G.M.S.

IVD

Catalog No.: KT015



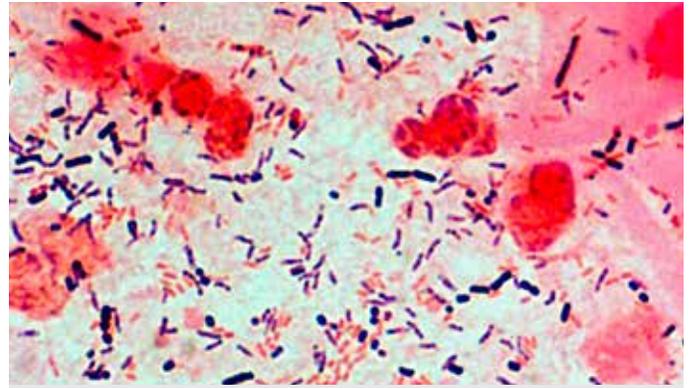
Human lung stained with G.M.S. kit (KT015).

This kit stains fungi and *Pneumocystis carinii* in paraffin tissue sections. The fungi and *Pneumocystis carinii* stain gray to black, while the background stains green.

## Gram

IVD

Catalog No.: KT018



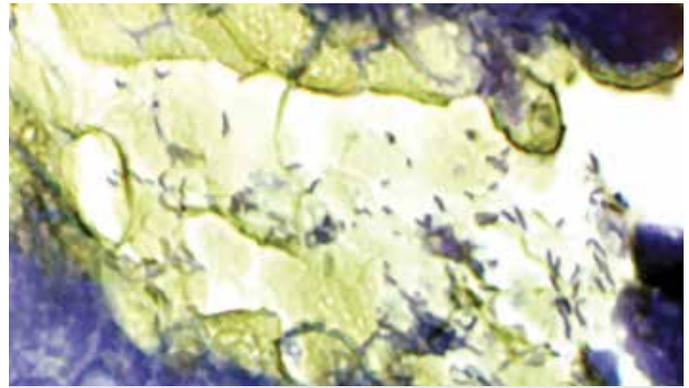
Gram positive and gram negative bacteria stained with Gram stain (KT018).

This kit stains Gram-positive and Gram-negative bacteria in paraffin tissue sections. The Gram-positive bacteria stain blue, Gram-negative bacteria stain red, while other tissues and the nuclei stain yellow and red respectively.

## H.Pylori Rapid Stain

IVD

Catalog No.: KT019



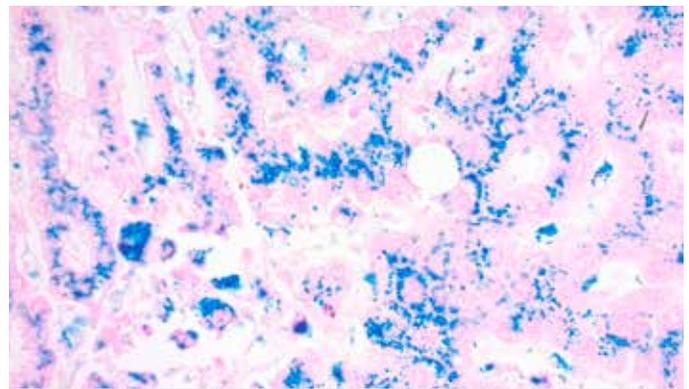
Human stomach stained with H. Pylori Rapid Stain (KT019).

This kit stains *Helicobacter pylori* bacteria in paraffin tissue sections. The *Helicobacter pylori* stain blue while the background stains pale blue.

## Iron Stain

IVD

Catalog No.: KT021

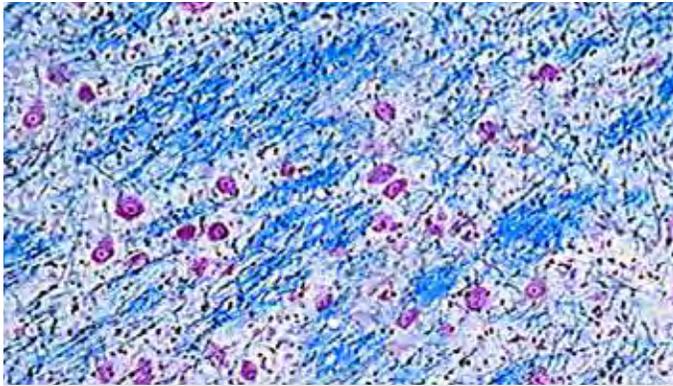


Iron Deposits in Liver Stained with Iron Stain (KT021).

This kit stains ferric iron in paraffin tissue sections. The iron deposits stain blue, while the nuclei and other tissue stain red and pink respectively.

**Luxol Fast Blue**

IVD

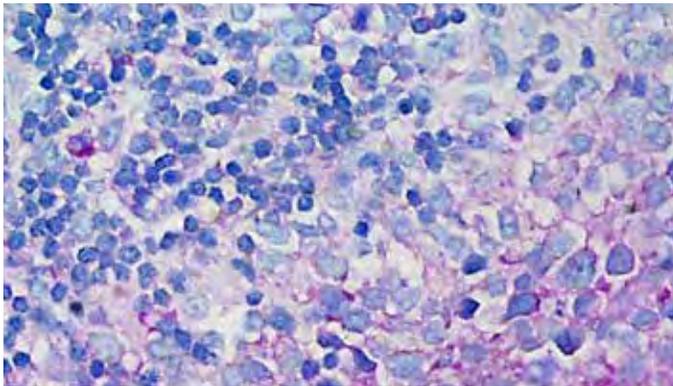
Catalog No.: **KT022**

Luxol Fast Blue stain on brain (KT022).

This kit stains myelin sheath and Nissl substance in paraffin tissue sections. The myelin fibers stain blue to greenish blue, while the cells stain pink to violet.

**Methyl Green Pyronin**

IVD

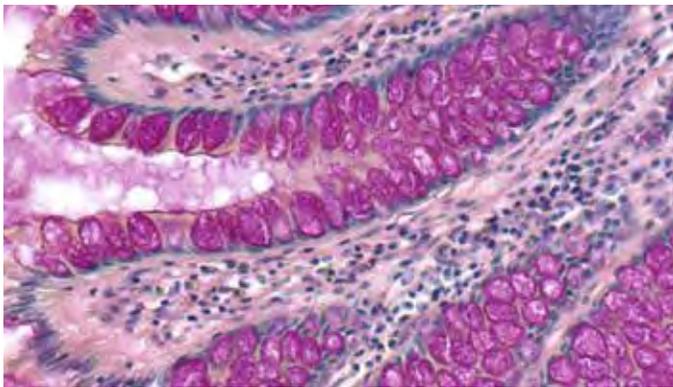
Catalog No.: **KT023**

Human tonsil stained with Methyl Green Pyronin kit (KT023).

This kit stains DNA and RNA in paraffin tissue sections. The DNA stains blue-green to green and RNA stains pink to red.

**Mucicarmine**

IVD

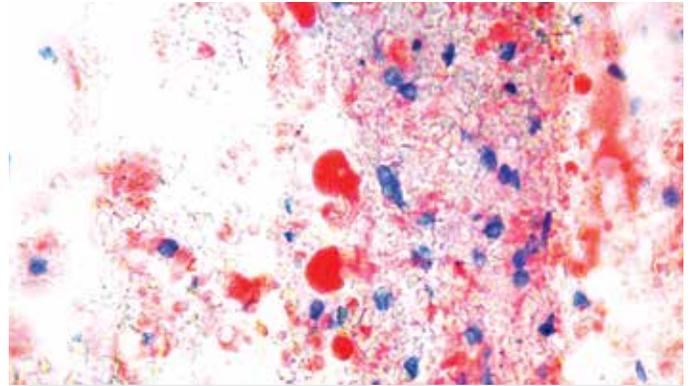
Catalog No.: **KT024**

Human colon tumor stained with Mucicarmine kit (KT024).

This kit stains epithelial mucins in paraffin tissue sections. The epithelial mucin stains pink to red, while the nuclei stain blue.

**Oil Red O**

IVD

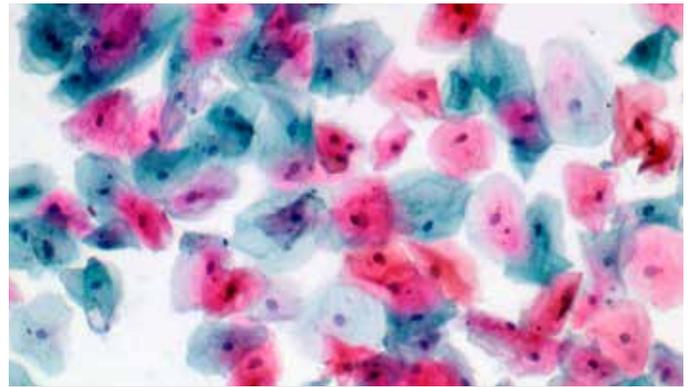
Catalog No.: **KT025**

Frozen breast tissue stained with Oil Red O (KT025).

This kit stains fat cells and neutral fat in frozen tissue sections. The fat cells and neutral fat stains red, while the nuclei stain blue.

**Papanicolaou Stain**

IVD

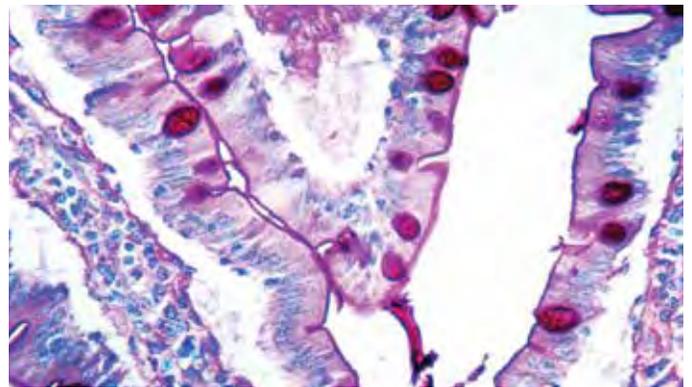
Catalog No.: **KT038**

Human Cervical smear stained with PAP stain (KT038).

The Papanicolaou (PAP) Stain Kit is designed to differentiate between a variety of cells in vaginal smears for detection of vaginal, uterine and cervical cancer.

**P.A.S.**

IVD

Catalog No.: **KT027**

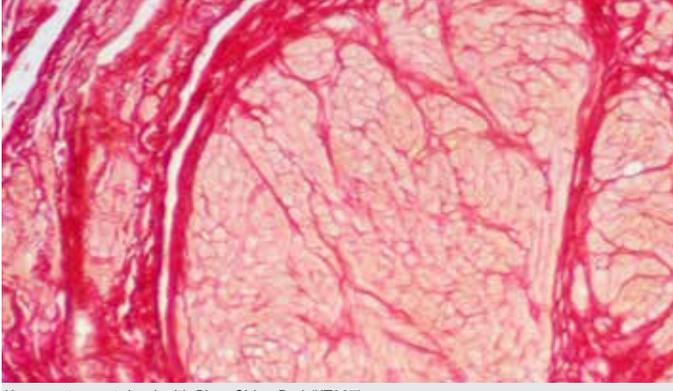
Human intestine stained with PAS stain (KT027).

This kit stains fungi, glycogen and mucin in paraffin tissue sections. The basement membrane, fungi, glycogen and mucin stain pink to red, while the nuclei and other tissue stain blue and green respectively.

## Picro Sirius Red Stain

IVD

Catalog No.: KT037



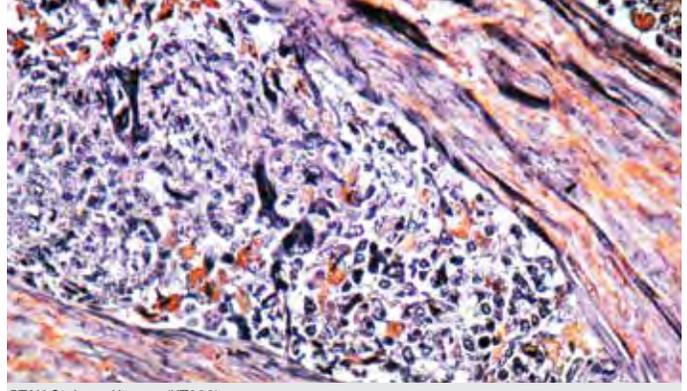
Human uterus stained with Picro Sirius Red (KT037).

The Picro-Sirius Red Stain Kit (For Collagen) is intended for use in the histological visualization of collagen I and III fibers in addition to muscle in tissue sections.

## P.T.A.H.

IVD

Catalog No.: KT029



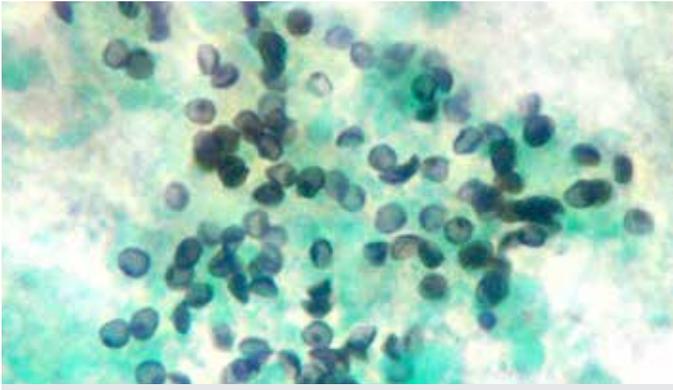
PTAH Stain on Uterus (KT029).

This kit stains collagen, fibrin and striated muscle in paraffin tissue sections. The collagen stains brownish red to red, fibrin and muscle stain blue, while the nuclei stain dark blue.

## Pneumocystis

IVD

Catalog No.: KT030



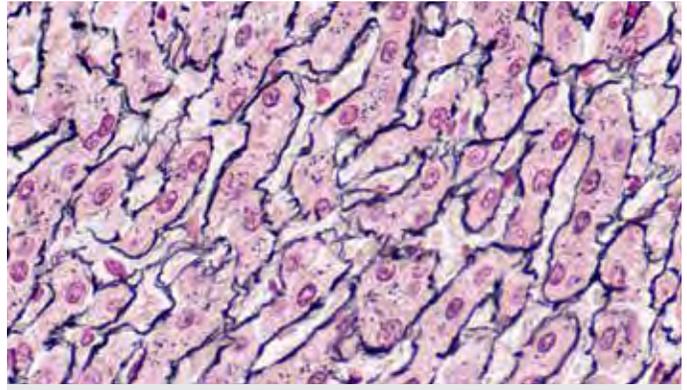
Pneumocystis Stain Kit on pneumocystis in Lung (KT030).

This kit stains Pneumocystis carinii in cytology smears as well as paraffin tissue sections. The Pneumocystis carinii stains violet to purple and the connective tissue stains blue to green.

## Reticulum

IVD

Catalog No.: KT031



Human liver stained with reticulum stain (KT031).

This kit stains reticulum fibers in paraffin tissue sections. The reticulum fibers stain gray to black, while the nuclei and background stain pink to rose.

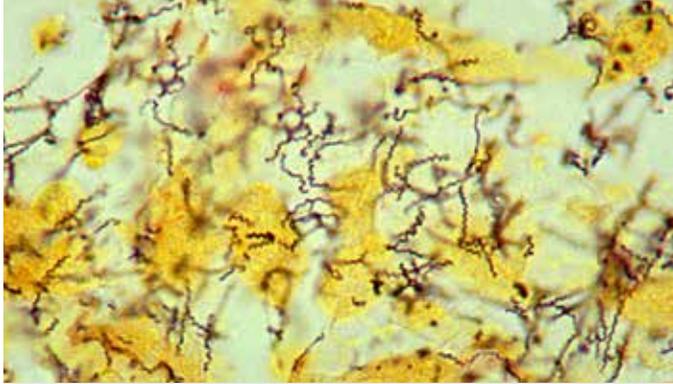
## Diagnostic BioSystems' Special Stain Kits

have been optimized for fast performance, ease of use, and provide the highest accuracy attainable.

Visit us at [dbiosys.com](http://dbiosys.com)

**Steiner**

IVD

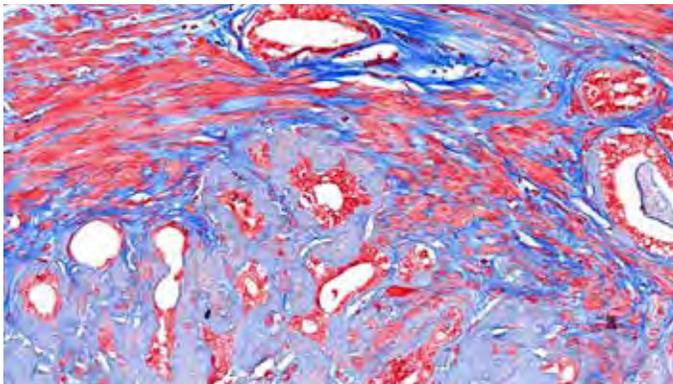
Catalog No.: **KT035**

Human breast stained with Steiner kit (KT035) showing *Treponema pallidum* staining.

This kit stains fungi, *Helicobacter pylori*, *Legionella pneumophila* and Spirochetes in paraffin tissue sections. The cat scratch fever, *Legionella pneumophila* stain dark brown, Spirochetes, *Helicobacter pylori* and fungi stain black, while the background stains yellow, tan or brown.

**Trichrome Stain**

IVD

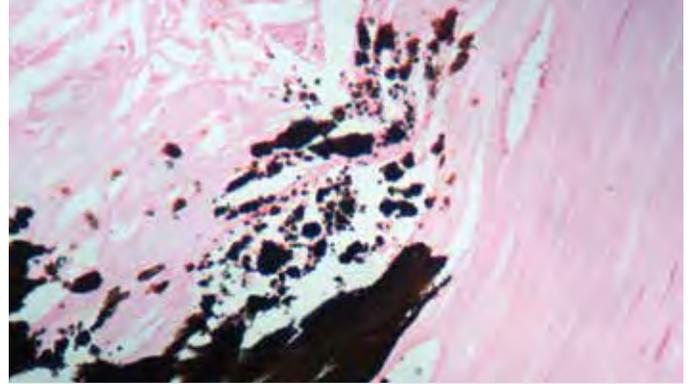
Catalog No.: **KT034**

Masson's Trichrome Stain on Lung Tissue (KT034).

This kit stains collagen and muscle in paraffin tissue sections. The muscle and intercellular fibers stain red, while the nuclei and collagen stain black and blue respectively.

**Von Kossa**

IVD

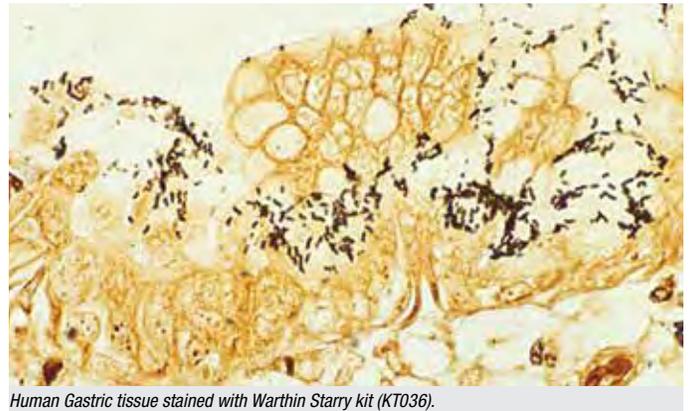
Catalog No.: **KT028**

Bone tissue stained with Von Kossa stain (KT028).

This kit stains calcium deposits in paraffin tissue sections. The calcium deposits stain black, while the nuclei and cytoplasm stain red and pink respectively.

**Warthin-Starry**

IVD

Catalog No.: **KT036**

Human Gastric tissue stained with Warthin Starry kit (KT036).

This kit stains *Helicobacter pylori*, Spirochetes, *Legionella pneumophila* and cat scratch fever bacteria in paraffin tissue sections. *Helicobacter pylori*, *Legionella pneumophila* stain dark brown, while Spirochetes and cat scratch fever bacteria stain black.

## Index I—Product Name

### ANCILLARY REAGENTS

#### ANCILLARY REAGENTS

Alkaline Phosphatase Enhancer, 100  
Broad Spectrum Negative Control, 100  
DAB Away Kit, 100  
DP3 for One-Step Deparaffinization, 100  
Elite Mini PAP Pen, 100  
Elite PAP Pen, 100  
FITC Diluent, 100  
Hematoxylin, 100  
Primary Antibody Diluent, 100  
TissueBond™ Reagent, 100  
Tween 20, 100

#### BLOCKERS

Background Blocker, 101  
Mouse on Mouse Blocking Reagent, 101  
Peroxidase Block, 101  
Tissue Primer, 101

#### BUFFERS

10X Immuno Wash Buffer, 102  
40X Immuno Wash Buffer, 102  
Phosphate Buffered Saline Tablets, 102

#### CHROMOGEN ENHANCERS

20X DAB Enhancer, 101  
ImmunoHisto-Sealer™, 99, 101  
Intensi/Fire, 101

#### MOUNTING MEDIA

CC/Mount™ Aqueous Permanent Mounting Medium, 102  
Fluoromount/Plus™, 102  
Fluoromount™, 102

#### ANTIGEN RETRIEVAL

10X Antigen Retrieval Buffer High, pH 10.0, 96  
10X Citrate Buffer for Heat Induced Epitope Recovery, pH 6.0, 96  
10X Citrate Buffer for Heat Induced Epitope Recovery, pH 7.0, 96  
10X Citrate Buffer for Heat Induced Epitope Recovery, pH 8.0, 96  
10X EDTA Buffer for Heat Induced Epitope Recovery, pH 8.0, 96  
10X Tris-EDTA Buffer For Heat Induced Epitope Recovery, pH 9.0, 96  
HistoZyme, 96  
Montage Opus Antigen Retrieval System, 98  
Pepsin Solution, 96  
Proteinase K 25X, 97  
QuatroSol I 10X Citrate Buffer, 97  
QuatroSol II 10X Tris EDTA Buffer, 97

#### CHROMOGENS

##### CHROMOGENS FOR AP

PermaBlue Plus/AP, 92  
PermaGreen Plus/AP, 92  
PermaRed/AP, 92  
PermaRed/AP-Auto, 92  
PermaRed/AP-AutoPlus, 92

##### CHROMOGENS FOR HRP

DAB Auto, 93  
High Contrast DAB, 93  
Mono AEC/Plus, 93  
PermaBlack/HRP, 93  
PermaBlue/HRP, 94  
PermaGreen/HRP, 94  
PermaRed/HRP, 94  
PermaYellow/HRP, 94  
Stable DAB/Plus, 95

### DETECTION SYSTEMS

#### MOH DAB KIT, 80

#### MOH DAB KIT PREDILUTED ABS

CD34, 81  
Cytokeratin, 81  
Cytokeratin 7, 81  
Epithelial Antigen, 81  
MART-1, 81  
Melanoma, 81  
MITF, 81  
Pan Cytokeratin, 81  
S100, 81  
SOX-10, 81

#### POLYVUE PLUS™ TWO STEP DETECTION SYSTEM

PolyVue Plus™ Mouse/Rabbit HRP/DAB Detection System, 88

#### STREPTAVIDIN BIOTIN BASED DETECTION SYSTEM

Alk. Phos. Mouse & Rabbit Kit (Fast Red), 90  
Alk. Phos. Mouse & Rabbit Staining Kit, 90  
Peroxidase Mouse & Rabbit Kit, 90  
Peroxidase Mouse & Rabbit Kit (DAB Liquid), 90  
Ready-to-Use Kits Components, 90  
ALP Label, 90  
HRP Label, 90  
Mouse & Rabbit Link, 90

#### UNOVUE PLUS™ DETECTION COMPONENTS

UnoVue Plus™ Mouse AP Detection Component, 90  
UnoVue Plus™ Mouse HRP Detection Component, 90  
UnoVue Plus™ Mouse/Rabbit AP Detection Component, 90  
UnoVue Plus™ Mouse/Rabbit HRP Detection Component, 90  
UnoVue Plus™ Rabbit AP Detection Component, 90  
UNOVUE PLUS™ ONE STEP DETECTION SYSTEM  
UnoVue Plus™ Mouse HRP/DAB Detection System, 89  
UnoVue Plus™ Mouse on Mouse (MOM) HRP/DAB Detection System, 89  
UnoVue Plus™ Mouse/Rabbit AP/PermaRed Detection System, 89  
UnoVue Plus™ Mouse/Rabbit HRP/DAB Detection System, 89

#### FITC CF™488 CONJUGATED ANTIBODIES

Albumin FITC CF488-Conjugated Antibody, 84  
C4d FITC CF488-Conjugated Antibody, 84  
Fibrinogen FITC CF488-Conjugated Antibody, 85  
IgA FITC CF488-Conjugated Antibody, 85  
IgA,G,M Cocktail FITC CF488-Conjugated Antibody, 85  
IgG FITC CF488-Conjugated Antibody, 85  
IgM FITC CF488-Conjugated Antibody, 86  
Kappa FITC CF488-Conjugated Antibody, 86  
Lambda Light Chain FITC CF488-Conjugated Antibody, 86

#### FITC CONJUGATED ANTIBODIES

C1q Complement FITC-Conjugated Antibody, 82  
C3c Complement FITC-Conjugated Antibody, 82

C4c Complement FITC-Conjugated Antibody, 82  
Fibrinogen FITC-Conjugated Antibody, 82  
IgA (alpha chain) FITC-Conjugated Antibody, 83  
IgG (Gamma chain) FITC-Conjugated Antibody, 83  
IgM (Mu chain) FITC-Conjugated Antibody, 83  
Kappa Light Chain FITC-Conjugated Antibody, 83  
Lambda Light Chain FITC-Conjugated Antibody, 83

### PRIMARY ANTIBODIES

$\alpha$ -1-Antichymotrypsin, 4  
 $\alpha$ -1-Antitrypsin, 4  
 $\alpha$ -Actinin, Sarcomeric, 4  
 $\alpha$ -Fetoprotein (AFP), 4  
 $\beta$ -Amyloid Protein, 7  
Actin, Muscle Specific, 5  
Actin, Sarcomeric, 5  
Actin,  $\alpha$ -Smooth Muscle, 5  
Adenovirus, 5  
Adipophilin, 6  
Adrenocorticotrophic Hormone (ACTH) (AH26), 6  
Albumin, 6  
ALK (Clone 4A4), 6  
ALK/p80 (Anaplastic Lymphoma Kinase), 7  
Amyloid A Component, 7  
Amyloid Precursor Protein (APP), 7  
Androgen Receptor, 8  
Bcl-2 Oncoprotein, 8  
Bcl-6 Oncoprotein, 8  
Bcl-10, 9  
BRCA1, 9  
C4D, 9  
CA 15-3, 9  
CA 19-9, 10  
CA 125, 10  
Cadherin, Pan, 10  
Calbindin-D-28K, 10  
Calcitonin, 11  
Caldesmon, 11  
Calponin-1, 11  
Calretinin, 12  
Caspase 1, 12  
Caspase 3/PPP32, 12  
Caspase 8/FLICE, 13  
Catenin,  $\beta$ , 13  
Cathepsin D, 13  
CD1a, 13  
CD3, 14  
CD3, T Cell, 15  
CD4, 15  
CD5, 15  
CD8, 16  
CD10, 16, 17  
CD15, 17  
CD20, 17  
CD21, B Cell, 17  
CD23, 18  
CD25/IL-2R  $\alpha$ , 18  
CD30/Ki-1 Antigen, 18  
CD31, Endothelial Cell, 19  
CD34, Endothelial Cell, 19  
CD43, T Cell, 19  
CD44/HCAM, 19  
CD45RO, T Cell, 20  
CD56/Neural Cell Adhesion Molecule-1, 20  
CD57, 20  
CD61/Platelet Glycoprotein IIIa, 20  
CD63, 21  
CD68, Macrophage, 21  
CD74, Lymphoid Marker, 21  
CD79a, Antigen, 22  
CD79a, B Cell, 22  
CD99/MIC2, Ewing's Sarcoma Marker, 22  
CD117/c-kit, 22  
CD138, 23  
CD163, 23  
Cdc25A, 23  
Cdc47/MCM7, 23  
CDX2, 24  
CEA (Carcinoembryonic Antigen), 24  
c-erbB-2/Oncoprotein, 25  
Chromogranin A, 25, 26  
Claudin 1, 26  
c-myc, 26  
Collagen Type IV, 26  
COX-2 (Cyclooxygenase-2), 27  
Cyclin D1, 27  
Cyclin E Protein, 28  
Cytokeratin, 28  
Cytokeratin 5, 28  
Cytokeratin 5/6, 28  
Cytokeratin 5/14, 29  
Cytokeratin 7, 29  
Cytokeratin 8/18, 30  
Cytokeratin 8, Low Molecular Weight, 30  
Cytokeratin 10, 30  
Cytokeratin 13, 30  
Cytokeratin 14, 31  
Cytokeratin 15, 31  
Cytokeratin 16, 31  
Cytokeratin 17, 31  
Cytokeratin 18, 32  
Cytokeratin 19, 32  
Cytokeratin 20, 32  
Cytokeratin, Acidic (AE1), 32  
Cytokeratin, Basic (AE3), 33  
Cytokeratin (CAM 5.2), 33  
Cytokeratin, HMW (34 $\beta$ E12), 34  
Cytokeratin, Pan, 34  
Cytokeratin, Pan (AE1/AE3), 34  
Cytokeratin, Wide Spectrum, 34  
Cytomegalovirus (CMV Cocktail), 35  
Desmin, 35  
DOG 1, 35  
E2F-1 Transcription Factor, 35  
E-Cadherin, 36  
EGFR (Epidermal Growth Factor Receptor), 36  
Elastin, 37  
Epithelial Antigen, 37  
Epithelial Membrane Antigen (EMA), 37  
Epstein-Barr Virus (EBV), 38  
ERCC1, 38  
ERG, 38  
Estrogen Receptor (ER), 38, 39  
Ezrin/p81/Cytovillin, 39  
Factor VIII (Von Willebrand Factor), 39  
Factor XIII-A, 40  
Fascin-1, 40  
Fibronectin, 40  
Fik-1/KDR/VEGFR2, 41  
Fit-1/VEGFR1, 41  
Galectin-3, 41  
Gastrin, 41  
GATA-3, 42  
GCDPF-15, 42  
GFAP (Glial Fibrillary Acidic Protein), 42  
GLUT-1, 43

Glycophorin A, 43  
Glycophorin C, 43  
Glypican-3, 44  
Granzyme B, 44  
Hairy Cell Leukemia, 44  
HBsAg, 45  
Heat Shock Protein 70 (HSP70), 45  
Hepatitis B Surface Antigen, HBsAg, 45  
Hepatocyte Specific Antigen (HSA/  
HepPar-1), 45  
Herpes Simplex Virus Type I (HSV1), 46  
Herpes Simplex Virus Type II (HSV II), 46  
Herpesvirus 8 (HHV8), 46  
HLA-DR ( $\beta$  chain of DP, DQ & DR), 46  
H. pylori, 47  
H. pylori (Helicobacter pylori), 47  
HSV Cocktail (Rabbit anti-HSV I + Mouse  
anti-HSV II), 47  
Human Chorionic Gonadotropin (hCG), 48  
Human Papilloma Virus Type 16  
(HPV 16), 48  
IDH1, 48, 49  
IgA, 49  
IgD, 49  
IgE, 49  
IgG, 50  
IgM, 50  
IgM (R1/69), 50  
Inhibin  $\alpha$ , 50  
INSM1, 3, 51  
Insulin, 51  
Kappa Light Chain, 51  
Ki-67, 52  
Ku(p70), 52  
Lambda Light Chain, 52, 53  
Laminin, 53  
LCA (Leukocyte Common Antigen), 53  
Lysozyme/Muramidase, 53  
Mammaglobin-A, 54  
MART-1, 54  
Mast Cell Chymase, 54  
Mast Cell Tryptase, 54  
Melanoma, 55  
Melanoma Cocktail, 55  
Melanoma (HMB45), 55  
Mesothelin, 56  
Mesothelioma, 56  
MGMT,(O(6)-Methylguanine-  
DNA-Methyltransferase), 56  
MiTF (Microphthalmia Transcription  
Factor), 56  
MLH-1 (Mismatch Repair Protein), 57  
MMP-9, 57  
MOC-31, 57  
MSH2, 57  
MSH6 (Mismatch Repair Protein), 58  
Mucin 5AC/Gastric Mucin, 58  
MUM1 Protein, 59  
Myelin Basic Protein (MBP), 59  
Myeloperoxidase (MPO), 59  
MyoD1, 60  
Myogenin, 60  
Myosin, Skeletal (Fast), 60  
Napsin A, 60  
Neurofilament, 61  
NKX2.2, 61  
NKX3.1, 61  
NSE (Neuron Specific Enolase), 61, 62  
OCT-3/4, 62  
p16 Clone JC2, 3, 62  
p27Kip1, 62  
p40, 63  
p53, 63

p57Kip2, 63  
p63, 3, 64  
p504s, 65  
p504S/ $\alpha$ -Methylacyl-CoA Racemase  
(AMACR), 64  
Pancreatic Polypeptide, 65  
Pan-TRK, 3, 65  
Pax-8, 66  
PCNA (Proliferating Cell Nuclear Antigen), 66  
PD-1, 66  
PD-L1, 67  
Perforin, 67  
pHH3, 67  
PIN5 Cocktail Rabbit anti-p40 + Mouse  
anti-Cytokeratin (HMW) and Rabbit  
anti-p504S (AMACR), 68  
Placental Alkaline Phosphatase (PLAP)  
(SP15), 68  
PMS2 (Mismatch Repair Protein), 68  
Pneumocystis carinii, 69  
Podoplanin/D2-40, 69  
Prohibitin, 70  
Prostate Specific Antigen (PSA), 70  
Prostate Specific Membrane Antigen  
(PSMA), 70  
Prostatic Acid Phosphatase (PSAP), 71  
PR (Progesterone Receptor), 69  
PTEN, 71  
Rad51, 71  
Renal Cell Carcinoma (RCC), 71  
Retinoblastoma Gene Protein (Rb), 72  
RPA/p34, 72  
S-100, 72, 73  
Smad4, 3, 73  
Smooth Muscle Myosin, 73  
SOX-10, 73, 74  
Synaptophysin, 74  
TAG-72/CA 72-4, 75  
Tdt (Terminal Deoxynucleotidyl  
Transferase), 75  
Thrombospondin (TSP), 75  
Thymidine Phosphorylase/Platelet-Derived  
Endothelial Cell Growth Factor, 75  
Thyroglobulin, 76  
Thyroid Peroxidase, 76  
TIMP-2, 76  
TNF Alpha, 77  
Transglutaminase II, 77  
Treponema Pallidum, 3, 77  
TTF-1 (Thyroid Transcription Factor-1), 78  
Tyrosinase, Melanoma Marker, 78  
Vascular Endothelial Growth Factor  
(VEGF), 78  
Vimentin, Porcine, 78  
Wilms Tumor 1 Protein (WT1), 79  
XRCC1, 79

### SPECIAL STAINS

A.F.B., 103  
Alcian Blue, pH 1.0, 103  
Alcian Blue, pH 2.5, 103  
Amyloid, 103  
Colloidal Iron, 104  
Combined Eosinophil-Mast Cell, 104  
Copper, 104  
Elastic, 104  
Fite, 104  
Fontana-Masson, 104  
Giemsa, 105  
G.M.S., 105  
Gram, 105  
H.Pylori Rapid Stain, 105  
Iron Stain, 105  
Luxol Fast Blue, 106  
Methyl Green Pyronin, 106

Mucicarmine, 106  
Oil Red O, 106  
Papanicolaou Stain, 106  
P.A.S., 106  
Picro Sirius Red Stain, 107  
Pneumocystis, 107  
P.T.A.H., 107  
Reticulum, 107  
Steiner, 108  
Trichrome Stain, 108  
Von Kossa, 108  
Warthin-Starry, 108

## Index II—Catalog Number

### ANCILLARY REAGENTS

#### ANCILLARY REAGENTS

FD001, 100  
K004, 100  
K011, 100  
K013, 100  
K039, 100  
K042, 100  
K053-06, 100  
K053-25, 100  
K053-100, 100  
K056-100AN, 100  
K067-125AN, 100  
K072-500AN, 100  
K082, 100

#### BLOCKERS

K023, 101  
K033, 101  
K054, 101  
K065, 101

#### BUFFERS

DMRE404-01, 102  
K005, 102  
K080, 102

#### CHROMOGEN ENHANCERS

K012, 101  
K045, 101  
K076, 99, 101  
MOUNTING MEDIA  
K002, 102  
K002-200, 102  
K024, 102  
K024-200, 102  
K048, 102

### ANTIGEN RETRIEVAL

AR360, 98  
K009, 96  
K030, 97  
K035, 96  
K036, 96  
K037, 96  
K038, 96  
K043, 96  
K044, 96  
K046, 96  
K046-50, 96  
K085, 97  
K086, 97

### CHROMOGENS

#### CHROMOGENS FOR AP

K049, 92  
K049-110, 92  
K049-Auto, 92  
K049-Auto-110, 92  
K057-AutoPlus, 92

K057-AutoPlus-110s, 92  
K058, 92  
K058-110, 92  
K059, 92  
K059-110, 92

#### CHROMOGENS FOR HRP

K047, 95  
K050, 93  
K050-110, 93  
K055, 93  
K060, 94  
K060-110, 94  
K062, 93  
K062-110, 93  
K063, 94  
K063-110, 94  
K074, 94  
K074-110, 94  
K075, 94  
K075-110, 94  
K081-AUTO, 93  
K081-AUTO-110, 93

### DETECTION SYSTEMS

#### MOH DAB KIT, 80

#### MOH DAB KIT PREDILUTED ABS

PDM011-MOH, 81  
PDM050-MOH, 81  
PDM072-MOH, 81  
PDM131-MOH, 81  
PDM153-MOH, 81  
PDM168-MOH, 81  
PDM181-MOH, 81  
PDM194-MOH, 81  
PDM563-MOH, 81  
PDM565-MOH, 81

#### POLYVUE PLUS™ TWO STEP DETECTION SYSTEM

PVP25D, 88  
PVP100D, 88  
PVP250D, 88  
PVP1000D, 88

#### STREPTAVIDIN BIOTIN BASED DETECTION SYSTEMS

KA500F/KA50F, 90  
KA500/KA50, 90  
KP500/KP50, 90  
KP500L/KP50L, 90  
M006, 90  
M008, 90  
M010, 90

#### UNOVUE PLUS™ ONE STEP DETECTION COMPONENTS

MRU-AP100, 90  
MRU-AP1000, 90  
MRU-HRP100, 90  
MRU-HRP1000, 90  
MU-AP100, 90  
MU-AP1000, 90  
MU-HRP100, 90  
MU-HRP1000, 90  
RU-AP100, 90  
RU-AP1000, 90

#### UNOVUE PLUS™ ONE STEP DETECTION SYSTEM

MMU100PD, 89  
UM100PD, 89  
UMR100PD, 89  
UMR1000PD, 89  
UVP25AR, 89  
UVP100AR, 89  
UVP1000AR, 89

<b>FITC</b>	Mob129, 4	Mob365, 17	Mob582R, 48	RP163, 63	PDM130, 20	PDM420, 59	PDR171, 41
F001, 83	Mob130, 8	Mob377, 72	Mob585, 57	RP167, 34	PDM131, 37	PDM423, 56	PDR172, 12
F002, 83	Mob138, 15	Mob380, 39	Mob586, 51	RP168, 67	PDM132, 36	PDM442, 9	PDR173, 73
F003, 82	Mob163, 20	Mob381, 35	RMAB001, 38	RP169, 47	PDM134, 56	PDM534, 6	PDR175, 12
F005, 82	Mob164, 20	Mob394, 48	RMAB002, 69	RP173, 73	PDM138, 31	PDM541, 41	PDR176, 65
F006, 82	Mob167, 21	Mob395, 46	RMAB003, 27	RP175, 12	PDM139, 28	PDM542, 46	PDRM001, 47
F007, 83	Mob168, 21	Mob399, 74	RMAB004, 52	RP176, 65	PDM140, 29	PDM544, 54	RMPD001, 38
F008, 83	Mob178, 27	Mob401, 37	RMAB005, 14	<b>PREDILUTED</b>	PDM141, 40	PDM546, 57	RMPD002, 69
F009, 83	Mob186, 31	Mob406, 37	RMAB008, 25	PDM002, 5	PDM143, 18	PDM548, 70	RMPD003, 27
F010, 82	Mob187, 32	Mob410, 7	RMAB009, 11	PDM003, 5	PDM144, 18	PDM549, 9	RMPD004, 52
	Mob189, 30	Mob416, 7	RMAB010, 12	PDM004, 17	PDM145, 28	PDM551, 59	RMPD005, 14
<b>FITC CF™488</b>	Mob190, 34	Mob418, 76	RMAB011, 15	PDM005, 24	PDM146, 55	PDM558, 69	RMPD008, 25
FLC207, 85	Mob194, 38	Mob420, 59	RMAB012, 16	PDM006, 35	PDM147, 58	PDM559, 47	RMPD009, 11
FLC208, 85	Mob196, 39	Mob421, 55	RMAB013, 18	PDM008, 42	PDM148, 57	PDM560, 40	RMPD011, 15
FLC209, 86	Mob200, 44	Mob422, 14	RMAB015, 26	PDM009, 53	PDM150, 78	PDM561, 44	RMPD012, 16
FLC211, 84	Mob202, 53	Mob423, 56	RMAB017, 68	PDM011, 55	PDM151, 38	PDM563, 29	RMPD013, 18
FLC212, 85	Mob207, 60	Mob424, 9	RMAB018, 74	PDM012, 61	PDM152, 70	PDM564, 42	RMPD015, 26
FLC213, 86	Mob212, 61	Mob426, 45	RMAB037, 16	PDM013, 63	PDM153, 54	PDM565, 73	RMPD017, 68
FLC214, 86	Mob220, 72	Mob428, 55	RMAB040, 23	PDM014, 66	PDM154, 60	PDM566, 6	RMPD018, 74
FLC215, 84	Mob223, 76	Mob429, 58	RMAB059, 24	PDM015, 20	PDM155, 62	PDM567, 10	RMPD037, 16
FLC216, 85	Mob227, 4	Mob430, 57	RMAB077, 74	PDM016, 8	PDM158, 60	PDM568, 53	RMPD040, 23
	Mob228, 10	Mob432, 24	RMAB078, 65	PDM018, 18	PDM159, 54	PDM569, 61	RMPD059, 24
<b>PRIMARY ANTIBODIES</b>	Mob229, 26	Mob433, 29	RMAB083, 15	PDM019, 39	PDM160, 54	PDM570, 45	RMPD077, 74
<b>CONCENTRATED</b>	Mob230, 37	Mob435, 50	RMAB086R, 64	PDM020, 19	PDM162, 45	PDM572, 67	RMPD078, 65
Mob001, 5	Mob231, 26	Mob437, 79	RMAB106, 27	PDM024, 44	PDM163, 58	PDM573, 66	RMPD083, 15
Mob002, 5	Mob234, 51	Mob440, 70	RMAB107, 56	PDM029, 78	PDM164, 32	PDM574, 71	RMPD086R, 64
Mob003, 7	Mob240, 17	Mob442, 9	RMPD010, 12	PDM033, 21	PDM165, 78	PDM575, 62	RMPD106, 27
Mob004, 17	Mob242, 22	Mob443, 30	RMPD034, 38	PDM037, 71	PDM166, 48	PDM576, 76	RMPD107, 56
Mob005, 8	Mob244, 6	Mob460, 23	RP004, 13	PDM043, 32	PDM167, 8	PDM577, 77	<b>SPECIAL STAINS</b>
Mob008, 24	Mob245, 8	Mob461, 36	RP005, 15	PDM044, 33	PDM168, 56	PDM578, 43	KT001, 103
Mob028, 17	Mob254, 18	Mob462, 56	RP006, 25	PDM046, 27	PDM169, 71	PDM579, 23	KT002, 103
Mob032, 18	Mob256, 19	Mob463, 60	RP007, 48	PDM048, 39	PDM170, 35	PDM580R, 49	KT003, 103
Mob034, 19	Mob261, 20	Mob464, 62	RP008, 25	PDM049, 32	PDM171, 68	PDM582R, 48	KT004, 104
Mob039, 19	Mob262, 22	Mob465, 71	RP010, 34	PDM050, 19	PDM172, 19	PDM583, 6	KT007, 104
Mob040, 53	Mob266, 28	Mob466, 35	RP012, 39	PDM053, 50	PDM173, 13	PDM584, 69	KT008, 103
Mob043, 20	Mob267, 36	Mob467, 73	RP013, 40	PDM055, 51	PDM175, 73	PDM585, 57	KT010, 104
Mob048, 25	Mob269, 45	Mob468, 8	RP014, 42	PDM056, 53	PDM176, 8	PDM586, 51	KT012, 104
Mob049R, 35	Mob273, 31	Mob469, 33	RP016, 47	PDM057, 4	PDM177, 79	PDR002, 15	KT013, 104
Mob052, 28	Mob274, 32	Mob471, 9	RP018, 46	PDM060, 19	PDM178, 50	PDR003, 25	KT014, 104
Mob054, 30	Mob277, 54	Mob474, 14	RP020, 49	PDM064, 20	PDM180, 66	PDR004, 13	KT015, 105
Mob055, 30	Mob278, 60	Mob486, 61	RP021, 49	PDM065, 21	PDM181, 33	PDR005, 53	KT016, 105
Mob057, 29	Mob281, 62	Mob502, 77	RP022, 49	PDM066, 21	PDM182, 36	PDR006, 62	KT018, 105
Mob059, 34	Mob285, 78	Mob526, 42	RP023, 50	PDM067, 25	PDM184, 9	PDR007, 70	KT019, 105
Mob060, 35	Mob288, 75	Mob534, 6	RP024, 50	PDM070, 30	PDM186, 14	PDR008, 73	KT021, 105
Mob062, 37	Mob290, 78	Mob541, 41	RP025, 51	PDM072, 34	PDM187, 24	PDR014, 39	KT022, 106
Mob064, 42	Mob291, 63	Mob542, 46	RP026, 52	PDM074, 34	PDM192, 32	PDR015, 51	KT023, 106
Mob066, 43	Mob292, 75	Mob544, 51	RP027, 52	PDM075R, 35	PDM194, 72	PDR016, 52	KT024, 106
Mob067, 43	Mob294, 18	Mob545, 75	RP028, 53	PDM077, 37	PDM199, 61	PDR017, 49	KT025, 106
Mob069R, 46	Mob301, 21	Mob546, 57	RP030, 65	PDM079, 45	PDM204, 37	PDR018, 50	KT027, 106
Mob074, 50	Mob305, 31	Mob548, 70	RP033, 70	PDM082R, 46	PDM205, 63	PDR019, 50	KT028, 108
Mob077, 53	Mob308, 78	Mob549, 9	RP035, 73	PDM085, 60	PDM206, 31	PDR021, 4	KT029, 107
Mob079, 55	Mob309, 12	Mob550, 36	RP044, 41	PDM088, 72	PDM209, 8	PDR023, 4	KT030, 107
Mob080, 61	Mob315, 75	Mob551, 59	RP046, 6	PDM094, 16	PDM211, 26	PDR024, 11	KT031, 107
Mob082, 63	Mob318, 76	Mob554, 10	RP047, 4	PDM095, 15	PDM212, 21	PDR027, 41	KT033, 104
Mob083, 66	Mob321, 40	Mob555, 67	RP048, 4	PDM096, 75	PDM213, 55	PDR028, 42	KT034, 108
Mob085, 71	Mob322, 60	Mob556, 11	RP050, 11	PDM097, 29	PDM219, 11	PDR030, 48	KT035, 108
Mob090, 78	Mob323, 70	Mob557, 52	RP052, 59	PDM099, 5	PDM223, 11	PDR032, 46	KT036, 108
Mob091, 69	Mob324, 71	Mob558, 69	RP053, 59	PDM100, 75	PDM226, 36	PDR035, 34	KT037, 107
Mob092, 32	Mob325, 79	Mob559, 47	RP054, 62	PDM104, 78	PDM230, 77	PDR045, 22	KT038, 106
Mob093, 33	Mob329, 72	Mob560, 40	RP063, 22	PDM106, 22	PDM245, 62	PDR046, 64	
Mob094, 21	Mob336, 38	Mob561, 44	RP066, 57	PDM107, 17	PDM261, 42	PDR048, 52	
Mob098, 19	Mob337, 23	Mob563, 29	RP076, 41	PDM110, 20	PDM270, 51	PDR049, 59	
Mob109, 10	Mob340, 23	Mob564, 42	RP077, 41	PDM111, 72	PDM271, 22	PDR050, 44	
Mob110, 10	Mob345, 11	Mob565, 73	RP080, 13	PDM116, 28	PDM273, 31	PDR053, 47	
Mob111, 72	Mob346, 54	Mob566, 6	RP096, 12	PDM117, 30	PDM276, 26	PDR054, 40	
Mob117, 16	Mob347, 54	Mob569, 61	RP097, 13	PDM118, 7	PDM292, 75	PDR057, 68	
Mob118, 22	Mob349, 56	Mob570, 45	RP103, 40	PDM120, 60	PDM300, 37	PDR055, 63	
Mob121, 39	Mob353, 7	Mob572, 67	RP105, 44	PDM122, 17	PDM318, 76	PDR060, 13	
Mob123, 32	Mob355, 5	Mob573, 66	RP111, 27	PDM123, 28	PDM321, 61	PDR061, 25	
Mob125, 45	Mob357, 58	Mob574, 71	RP123, 7	PDM124, 43	PDM323, 10	PDR167, 34	
Mob127, 31	Mob361, 28	Mob575, 62	RP128, 43	PDM125, 22	PDM340, 23	PDR168, 67	
Mob128, 5	Mob362, 28	Mob577, 77	RP134, 64	PDM127, 17	PDM395, 46	PDR169, 47	
	Mob363, 13	Mob580R, 49	RP153, 26	PDM128, 38	PDM418, 76	PDR170, 40	



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