



C N I O

Mouse and Rat  
Monoclonal Antibodies 2018

## CNIO Monoclonal Antibodies Unit

The Monoclonal Antibodies (mAb) Unit provides CNIO Research Groups with the “à la carte”, generation of mAbs which can then be used as tools to characterise new pathways involved in cancer development. We are highly specialised in mouse and rat monoclonal antibodies production. The Unit also offers mAbs production in gene-inactivated mice, mAb characterisation and validation, medium-scale mAb production and a service of Mycoplasma testing for the cell culture facility. The Unit is highly specialised in the characterisation and validation of antibodies. The mAbs generated by the Unit are extensively validated using a large set of tissue samples (specifically designed tissue-microarrays) and cell lines. After validation the mAbs are then tested in several applications. This work helps CNIO investigators save valuable research funds and effort, providing reliable reagents for use in their research projects.

### Techniques Available

- Monoclonal antibodies production in mice
- Monoclonal antibodies production in gene-inactivated mice
- Rat monoclonal antibodies
- Antibody characterization
- Development of double and triple immunostaining techniques
- Mycoplasma testing
- Genetic immunization

### Monoclonal Antibodies Staff

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Cover illustration: Gianni Turra “Condomini Testa”

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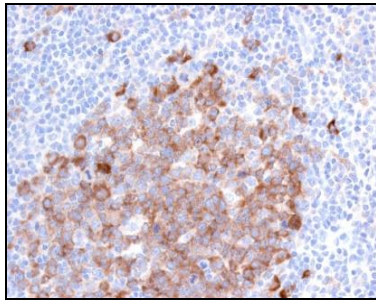
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## Mouse Monoclonal Antibody



## AID

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	JUA51E
<b>CONTROL:</b>	Ramos Cell Line
<b>LOCALIZATION:</b>	Nuclear and cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Maturation of the antibody repertoire is mediated by two different mechanisms: class-switch recombination (CSR) and somatic hypermutation (SHM). CSR leads to the production of antibodies of different isotypes whereas SHM leads to the selection of B cells expressing a BCR with high affinity for antigen. The activation-induced cytidine deaminase (AID) was recently shown to play a key role in these two mechanisms.

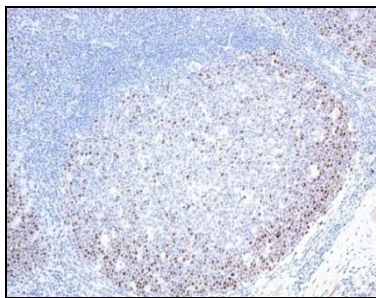
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not working	
<b>IHC-P</b>	1:2 supernatant	ER2 15 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	1:2	
<b>IP</b>	1:2	

### REFERENCES

Kanellis G, Roncador G, Arribas A, Mollejo M, Montes-Moreno S, Maestre L, Campos-Martin Y, Martinez-Torrecuadrada JL, Sanchez-Verde L, Pajares R, Cigudosa JC, Martin MC and Piris MA. Identification of MNDA as a new marker for Nodal Marginal Zone Lymphoma. *Leukemia*. 2009 Oct;23(10):1847-57.

## Rat Monoclonal Antibody



## A-myb/B-myb/C-myb

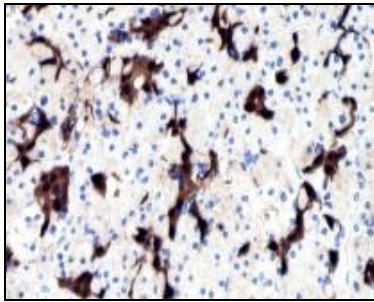
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	Dani51
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

The myb gene family consists of three members, named A, B and C-myb which encode nuclear proteins that function as transcriptional transactivators. A-myb is predominantly expressed in the male germ cells, although low levels of A-myb expression was also detected in ovaries, brain as well as B-cells at the germinal centers. In contrast to the tissue-specific expression of A-myb, the B-myb gene expression seems to be ubiquitous. C-myb is predominantly expressed in immature hematopoietic cells.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2 supernatant	ER2 30 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2 supernatnat	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## ANX4

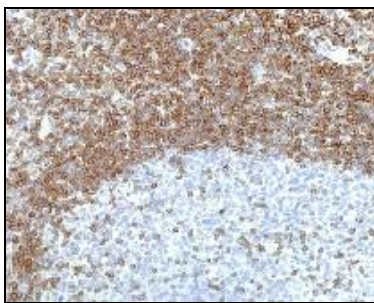
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	ANX47
<b>CONTROL:</b>	Pancreas
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Annexin IV (ANX4) belongs to the annexin family of calcium-dependent phospholipid binding proteins. Although their functions are still not clearly defined, several members of the annexin family have been implicated in membrane-related events along exocytotic and endocytotic pathways. Isolated from human placenta, ANX4 encodes a protein that has possible interactions with ATP, and has in vitro anticoagulant activity and also inhibits phospholipase A2 activity. ANX4 is almost exclusively expressed in epithelial cells.

APPLICATIONS	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not done	
IHC-P	1:10 supernatant	ER2 20 min Novolink
Elisa	1:1000	
IF	Not done	
WB	1:2	
IP	Not done	

**Commercialized by:** Sigma Aldrich

## Rat Monoclonal Antibody



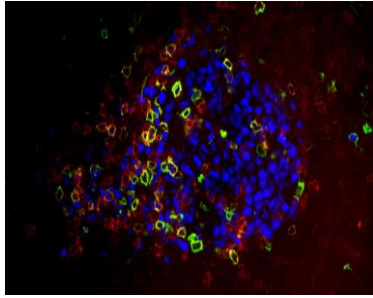
## BCL-2

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	NOR 235J
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Human

*BCL-2* is a human proto-oncogene located on chromosome 18. Its product is an integral membrane protein (called Bcl-2) located in the membranes of the endoplasmic reticulum, nuclear envelope, and in the outer membranes of the mitochondria. Suppresses apoptosis in a variety of cell systems including factor-dependent lymphohematopoietic and neural cells. Regulates cell death by controlling the mitochondrial membrane permeability.

APPLICATIONS	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Neat	
IHC-P	1:5 supernatant	ER1 30min Novolink
Elisa	1:1000	
IF	Not done	
WB	Neat	
IP	Not done	

## Mouse Monoclonal Antibody



## BCL-6

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	G1191E
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

Bcl-6 is a transcriptional regulator gene, which codes for a 706-amino-acid nuclear zinc finger protein. Antibodies to this protein stain the germinal centre cells in lymphoid follicles, the follicular cells and interfollicular cells in Follicular Lymphoma, Diffuse Large B-Cell Lymphomas, and Burkitt's lymphoma, and the majority of the Reed-Sternberg cells in Nodular Lymphocyte Predominant Hodgkin's Disease. In contrast, anti-BCL-6 rarely stains Mantle Cell Lymphoma and MALT Lymphoma.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:150	
<b>IHC-P</b>	1:300 supernatant	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:100	EDTA
<b>WB</b>	1:10	
<b>IP</b>	1:10	

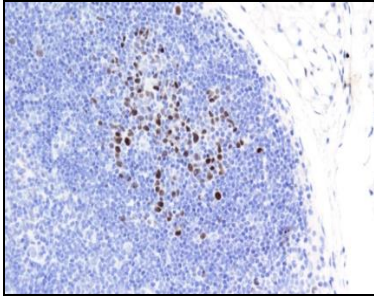
**Commercialized by:** Cell Marque, Biolegend, Thermofisher, Biocare and Active Motif.

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- Verdes-Montenegro JF, Garcia JF, Maestre L, Lucas-Campeno E, Sanchez-Verde L, Romero-Chala S, Piris MA, Roncador G. Genetic Immunization: a New Monoclonal Antibody for the Detection of BCL-6 Protein in Paraffin Sections. *J Histochem Cytochem.* 2006.
- Nam-Cha SH, Montes-Moreno S, Salcedo MT, Sanjuan J, Garcia JF and Piris MA. Lymphocyte-rich classical Hodgkin's lymphoma: distinctive tumor and microenvironment markers. *Modern Pathology* (2009) 22, 1006–1015.
- Marion Traver, Yenlin Huang, Laurence de Leval, Nadine Martin-Garcia, Marie-Helene Delfau-Larue, Françoise Berger, Jacques Bosq, Josette Brière, Jean Soulier, Elizabeth Macintyre, Teresa Marafioti, Aurélien De Reyniès, Philippe Gaulard. Molecular features of hepatosplenic T-cell lymphoma unravels potential novel therapeutic targets. *Blood.* 14 June 2012.
- Hsiao-Wei Tsao, Tzong-Shyuan Tai, William Tseng, Hui-Hsin Chang, Roland Grenningloh, Shi-Chuen Miaw, I-Cheng Ho. Ets-1 facilitates nuclear entry of NFAT proteins and their recruitment to the IL-2 promoter. *Proceedings of the National Academy of Sciences of the United States of America.* 24 September 2013.
- J Cao, X Zhang, Q Wang, G Qiu, C Hou, J Wang, Q Cheng, Y Lan, H Han, H Shen, Y Zhang, X Yang, B Shen, J Zhang. Smad4 represses the generation of memory-precursor effector T cells but is required for the differentiation of central memory T cells. *Cell Death & Disease* on 20 November 2015.

## Mouse Monoclonal Antibody

# BCL-6 (Mouse specific)



<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	42B
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Mouse and human

Bcl-6 is a transcriptional regulator gene, which codes for a 706-amino-acid nuclear zinc finger protein. Antibodies to this protein stain the germinal centre cells in lymphoid follicles, the follicular cells and interfollicular cells in Follicular Lymphoma, Diffuse Large B-Cell Lymphomas, and Burkitt's lymphoma, and the majority of the Reed-Sternberg cells in Nodular Lymphocyte Predominant Hodgkin's Disease. In contrast, anti-BCL-6 rarely stains Mantle Cell Lymphoma and MALT Lymphoma.

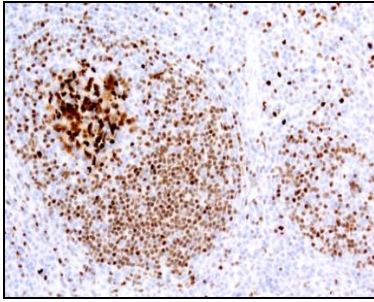
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:4 supernatant	
<b>IHC-P</b>	1:4 supernatant 1:200 purified	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Neat supernatant	
<b>WB</b>	Neat supernatant	
<b>IP</b>	Not done	

### REFERENCES

Verdes-Montenegro JF, Garcia JF, Maestre L, Lucas-Campeno E, Sanchez-Verde L, Romero-Chala S, Piris MA, Roncador G. Genetic Immunization: a New Monoclonal Antibody for the Detection of BCL-6 Protein in Paraffin Sections. J Histochem Cytochem. 2006.

## Mouse Monoclonal Antibody



## BCL7A

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	15C
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

This gene is directly involved, with Myc and IgH, in a three-way gene translocation in a Burkitt lymphoma cell line. As a result of the gene translocation, the N-terminal region of the gene product is disrupted, which is thought to be related to the pathogenesis of a subset of high-grade B cell non-Hodgkin lymphoma.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	1:40	
<b>IHC-P</b>	1:40	ER2 20min Novolink supernatant
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat	
<b>IP</b>	Not done	

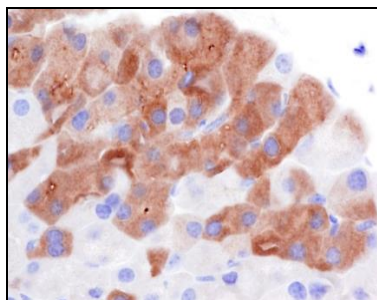
**Commercialized by:** Millipore and BD Bioscience

### REFERENCES

Ramos-Medina R, Montes-Moreno S, Maestre L, Cañamero M, Rodríguez-Pinilla M, Martínez-Torrecuadrada J, Piris MA, Majid A, Dyer MJ, Pulford K, Roncador G (2012). BCL7A protein expression in normal and malignant lymphoid tissues. *Br J Haematol.* 2013 Jan;160(1):106-9.

## Rat Monoclonal Antibody

### Beta-Galactosidase



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	3A9A
<b>CONTROL:</b>	Beta-gal expressing tissues
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	N/A

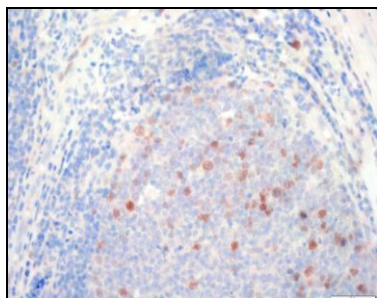
Beta galactosidase is coded by a gene (*lac z*) in the *lac* operon of *Escherichia coli*. It is a metalloenzyme that splits lactose into glucose and galactose. It hydrolyzes terminal, non-reducing beta-D-galactose residues in beta-D-galactosides.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Neat	
<b>IHC-P</b>	1:125	CC1m 40' det3+OR (Ventana)
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody

### BPTF



<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	PAC 33A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

Nucleosome-remodeling factor subunit BPTF is a protein that in humans is encoded by the *BPTF* gene. Analysis of the original protein (fetal Alz-50 reactive clone 1, or FAC1), identified as an 810 aa protein containing a DNA-binding domain and a zinc finger motif, suggested it might play a role in the regulation of transcription. High levels of FAC1 were detected in fetal brain and in patients with neurodegenerative diseases.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:100 supernatant	ER2 15 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:50 supernatant	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## BSA

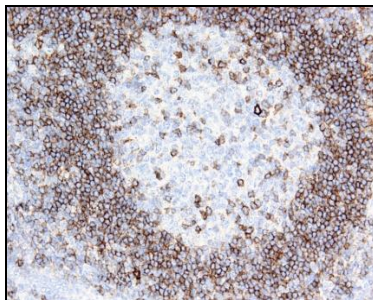
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	63A
<b>CONTROL:</b>	BSA protein
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG1
<b>REACT WITH</b>	Bovine

Serum albumin, the main protein of plasma, has a good binding capacity for water, Ca<sup>2+</sup>, Na<sup>+</sup>, K<sup>+</sup>, fatty acids, hormones, bilirubin and drugs. Its main function is the regulation of the colloidal osmotic pressure of blood. Major zinc transporter in plasma, typically binds about 80% of all plasma zinc.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Not done	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## BTLA

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	FLO67B
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

B and T lymphocyte attenuator (BTLA) has been recently identified as a new inhibitory receptor of the CD28 superfamily, with similarities to cytotoxic T lymphocyte activation antigen (CTLA-4) and programmed death (PD-1). Engagement of BTLA on T lymphocytes can profoundly reduce the T cell receptor TCR-mediated activation.

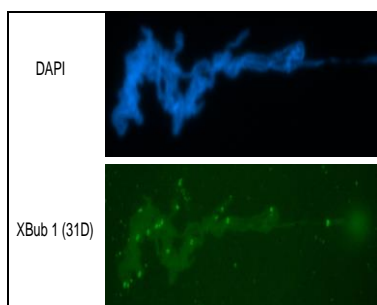
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Neat	
<b>IHC-P</b>	1: 40 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	1:2	
<b>IP</b>	Not Done	

Commercialized by: Millipore.

## Mouse Monoclonal Antibody

### BUB-1 (Xenopus specific)



<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	31D
<b>CONTROL:</b>	Xenopus tissue
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Xenopus tissue

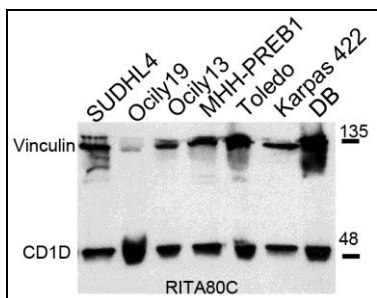
Serine/threonine protein kinase xBub1 is present in resting oocytes and its protein level increases slightly during oocyte maturation and early embryogenesis. In *Xenopus* oocytes, Bub1 is localized to kinetochores during both meiosis I and meiosis II, and the electrophoretic mobility of Bub1 upon SDS-PAGE decreases during meiosis I, reflecting phosphorylation and activation of the enzyme.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	1:2	
IHC-P	Not done	
Elisa	1:1000	
IF	Not done	
WB	1:2	
IP	1:2	

## Mouse Monoclonal Antibody

### CD1d



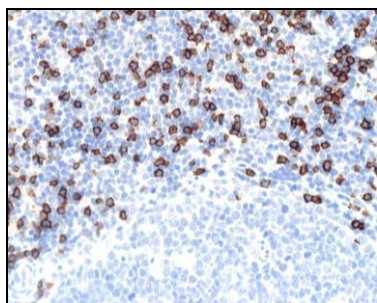
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	RITA80C
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cellular membrane
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

CD1d is a MHC-like, type I transmembrane protein, member of the CD1 family and the immunoglobulin superfamily. On the cell surface, CD1d forms a heterodimer with  $\beta$ 2-microglobulin. CD1d is expressed by antigen-presenting cells such as B cells, monocytes/macrophages, dendritic cells, and some non-lymphoid cells. Cortical thymocytes express CD1d but the expression is lost in mature T cells.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not done	
IHC-P	Neat supernatant	20min ER2
Elisa	1:1000	
IF	Not done	
WB	Neat supernatant	
IP	Not done	

## Rat Monoclonal Antibody



## CD8a

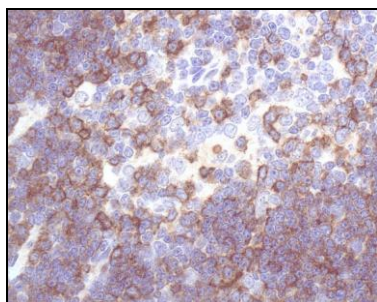
<b>TYPE:</b>	Rat Monoclonal
<b>CLONE:</b>	NOR132H
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Membrane
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

CD8 (cluster of differentiation 8) is a transmembrane glycoprotein that serves as a co-receptor for the T cell receptor (TCR). Like the TCR, CD8 binds to a major histocompatibility complex (MHC) molecule, but is specific for the class I MHC protein. CD8 antigen is strongly expressed on human cytotoxic T cells and thymocytes, and is also expressed on a subset of NK cells.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:20	
<b>IHC-P</b>	1:20 supernatant	ER1 30min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## CD8a (Mouse specific)

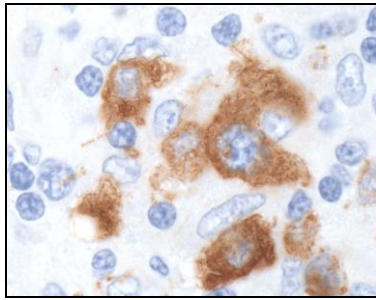
<b>TYPE:</b>	Rat Monoclonal
<b>CLONE:</b>	OTO94A
<b>CONTROL:</b>	Mouse thymus
<b>LOCALIZATION:</b>	Membrane
<b>ISOTYPE:</b>	IgG2c
<b>REACTS WITH:</b>	Mouse

Mouse CD8a is an integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class I molecule:peptide complex.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:200	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat supernatant	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## CD15

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	153A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgM
<b>REACTS WITH:</b>	Human

This monoclonal antibody reacts with the CD15 antigen, a trisaccharide structure, 3-fucosyl-N-acetyllactosamine, also known as X-hapten. This antigen is expressed by Reed-Sternberg Cells, granulocytes and is also found in a number of normal tissue and cell types.

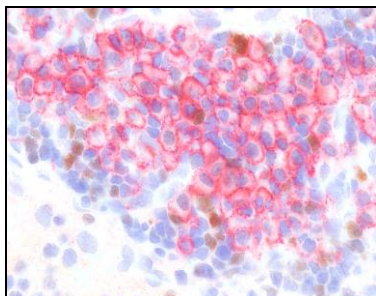
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:5	
<b>IHC-P</b>	1:2 supernatant	ER1 30 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	Citrate, EDTA
<b>WB</b>	1:2	
<b>IP</b>	1:2	

### REFERENCES

Nam-Cha SH, Montes-Moreno S, Salcedo MT, Sanjuan J, Garcia JF and Piris MA. Lymphocyte-rich classical Hodgkin's lymphoma: distinctive tumor and microenvironment markers. *Modern Pathology* (2009) 22, 1006–1015.

## Mouse Monoclonal Antibody



## CD138

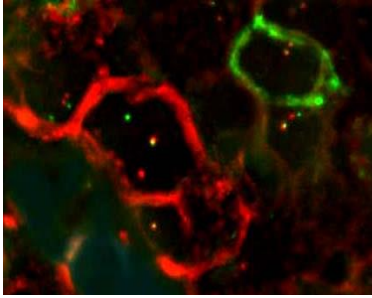
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	CRUZ180A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	membrane
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Syndecan-1 also known as SDC1 and CD138, is the most extensively studied member of the syndecan family. It is found mainly in epithelial cells, but its expression is developmentally regulated during embryonic development. Syndecan-1/SDC1/CD138 has been shown to mediate cell adhesion to several ECM molecules, and to act as a coreceptor for fibroblast growth factors, potent angiogenic growth factors involved also in differentiation.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:40 supernatant	ER1 30 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Not working	
<b>IP</b>	Not Done	

## Mouse Monoclonal Antibody



## CD30

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	CON6D
<b>CONTROL:</b>	Hodgkin's Lymphoma
<b>LOCALIZATION:</b>	Membrane
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

This antibody reacts with a 595 amino acid transmembrane glycoprotein with a molecular weight of 120kD. This antibody reacts with mononuclear cells in Hodgkin lymphoma, Reed-Sternberg cells and most Anaplastic Large Cell Lymphomas. It stains large cells localized around the B cell in the lymphoid tissues. This antibody stains the cell surface and the golgi region in the cells.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	Neat supernatant 1: 100 purified	ER1 30 min Novolink ER1 30 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	Citrate, EDTA
<b>WB</b>	1:2	
<b>IP</b>	1:2	

**Commercialized by:** ThermoFisher, Abcam and Biocare

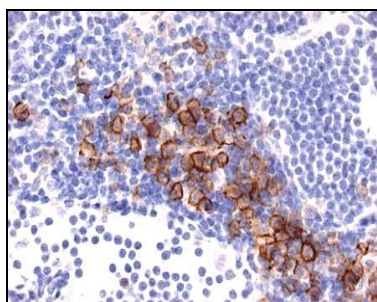
### REFERENCES

Lau SK1, Thomas P, Weiss LM. Immunohistochemical evaluation of CON6D/B5: a new CD30 monoclonal antibody. *Appl Immunohistochem Mol Morphol*. 2010 May;18(3):273-7

Nam-Cha SH, Montes-Moreno S, Salcedo MT, Sanjuan J, Garcia JF and Piris MA. Lymphocyte-rich classical Hodgkin's lymphoma: distinctive tumor and microenvironment markers. *Modern Pathology* (2009) 22, 1006–1015.

Göran Mattsson, Soo Yong Tan, David J P Ferguson, Wendy Erber, Susan H Turner, Teresa Marafioti, David Y Mason. Detection of genetic alterations by immunoFISH analysis of whole cells extracted from routine biopsy material. *The Journal of Molecular Diagnostics: JMD*. 1 September 2007.

## Mouse Monoclonal Antibody



## CD38

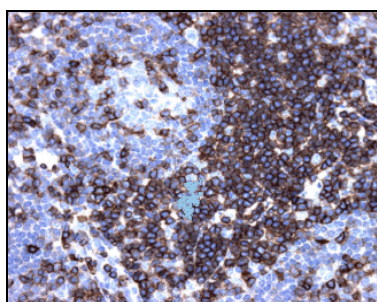
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	MIX187A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Membrane
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

CD38 (cluster of differentiation 38), also known as cyclic ADP ribose hydrolase is a glycoprotein found on the surface of many immune cells (white blood cells), including CD4+, CD8+, B lymphocytes and natural killer cells. CD38 also functions in cell adhesion, signal transduction and calcium signaling.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Neat supernatant	
<b>IHC-P</b>	Neat supernatant	ER1 30 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not Done	
<b>WB</b>	Neat supernatant	
<b>IP</b>	Neat supernatant	

## Mouse Monoclonal Antibody



## CD43

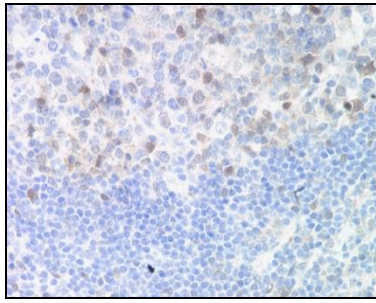
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	93F
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Membrana, Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Recognise a 110kD protein, identified as CD43. CD43 is the major sialoglycoprotein on thymocytes, T cell and neutrophils. It is also present on activated B cell, plasma cell, NK cells, granulocytes, monocytes, macrophages, platelets, and bone marrow haematopoietic stem cells

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:100	
<b>IHC-P</b>	1:400 supernatant	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:400	Citrate, EDTA
<b>WB</b>	1:10	
<b>IP</b>	1:10	

## Mouse Monoclonal Antibody



## CDK6

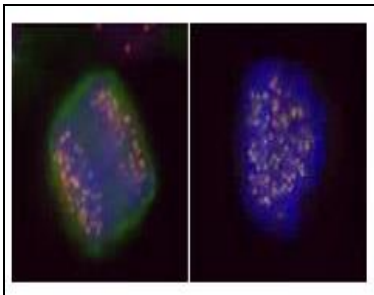
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	98D and 19G
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear, cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

This antibody recognizes a protein of 40 kDa, identified as cyclin-dependent kinase-6 (cdk6, also known as p40cdk6 and PLSTIRE). Cyclin-dependent kinases (cdk) are the catalytic subunits of the cyclin/cdk complexes, which phosphorylate substrates on threonine/serine residues. Cdk6 associates with the D-type cyclins and is important in the progression of cells from the G1-phase to the S-phase of the cell cycle.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	1:15	
IHC-P	1:30 supernatant	ER2 20min Novolink
Elisa	1:1000	
IF	Not done	
WB	1:50	
IP	Not done	

## Mouse Monoclonal Antibody



## CENP-C1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	AL61A and AL159A
<b>CONTROL:</b>	Hela cell line
<b>LOCALIZATION:</b>	Centromere
<b>ISOTYPE:</b>	AL61 (IgG1) and AL159 (IgG2b)
<b>REACTS WITH:</b>	Human

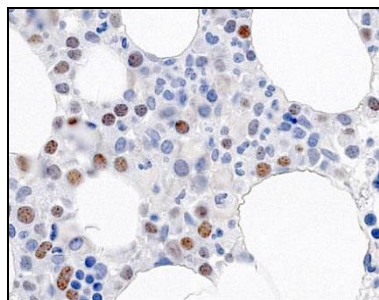
Centromere Protein C (CENP-C) is a component of the CCAN (constitutive centromere associated network), a group of proteins that localize to the centromeres both in interphase and mitosis. This protein appears to play a central role both in centromere specification and in kinetochore-microtubule dynamics.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	1:10 supernatant	
IHC-P	Not done	
Elisa	Not done	
IF	1:10 supernatant	
WB	1:2 supernatant	
IP	Not done	

Commercialized by: Millipore

## Rat Monoclonal Antibody



## C-myb

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	ANA236B
<b>CONTROL:</b>	Thymus
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

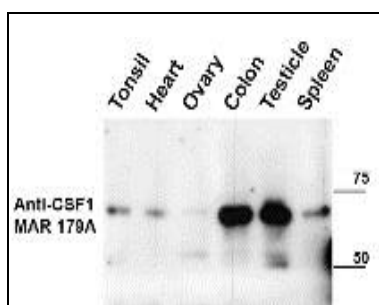
The c-Myb proto-oncogene is a 75 kDa protein involved in growth regulation and differentiation in many different cell types but it is predominantly expressed in immature hemopoietic cells where it plays an important role in cell proliferation. c-Myb is a short-lived sequence specific DNA-binding protein that regulates transcription of several important genes involved directly in cellular processes such as proliferation, differentiation, and apoptosis.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2 supernatant	ER2 30 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	1:2 supernatant	
<b>IP</b>	1:2 supernatant	

**Commercialized by:** Abcam.

## Mouse Monoclonal Antibody



## CSF1

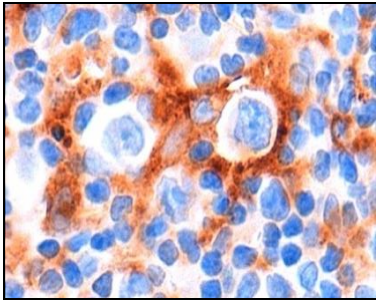
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE :</b>	MAR179A
<b>CONTROL:</b>	Human spleen
<b>LOCALIZATION:</b>	Extracellular
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

The colony stimulating factor 1 (CSF1), also known as macrophage colony-stimulating factor (M-CSF), is a secreted cytokine which influences hematopoietic stem cells to differentiate into macrophages or other related cell types. Eukaryotic cells also produce M-CSF in order to combat intercellular viral infection.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2 supernatant	
<b>IP</b>	1:2 supernatant	

## Mouse Monoclonal Antibody



## CSF1R

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE: :</b>	FER216
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

The protein encoded by this gene is the receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages. This receptor mediates most if not all of the biological effects of this cytokine. Ligand binding activates the receptor kinase through a process of oligomerization and transphosphorylation.

### APPLICATIONS

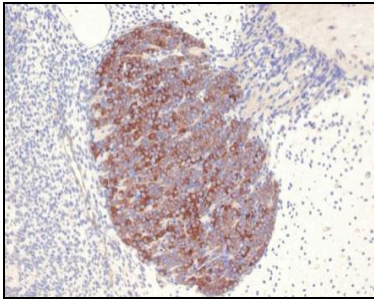
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2 supernatant	
<b>IHC-P</b>	1:10 supernatant	20 min ER2 Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2 supernatant	
<b>IP</b>	1:2 supernatant	

**Commercialized by:** Millipore

### REFERENCES

Martín-Moreno AM, Roncador G, Maestre L, Mata E, Jiménez S, Martínez-Torrecuadrada JL, Reyes-García AI, Rubio C, Tomás JF, Estévez M, Pulford K, Piris MA, García JF. CSF1R Protein Expression in Reactive Lymphoid Tissues and Lymphoma: Its Relevance in Classical Hodgkin Lymphoma. PLoS One. 2015 Jun 12;10(6).

## Mouse Monoclonal Antibody



## CPEB4

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	ERE93C
<b>CONTROL:</b>	Mouse embryo and human brain
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Mouse and human

Cpeb1–4. All CPEB proteins in mammals have RNA-binding domains in their carboxy-termini that are responsible for binding to their substrate mRNAs via recognition of specific sequences in the 3' untranslated region (3'UTR). CPEB4 involves in some forms of synaptic plasticity and regulate translation by binding to regulatory motifs of defined mRNA targets.

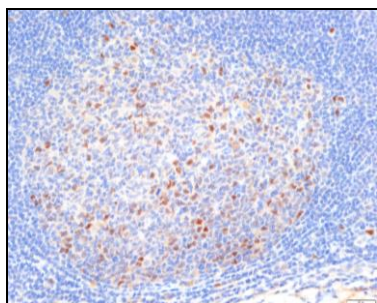
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Neat supernatant	
<b>IHC-P</b>	1:1500	20min ER2 Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:50	
<b>WB</b>	Neat supernatant	
<b>IP</b>	Not done	

### REFERENCES

Pérez-Guijarro E, Karras P, Cifdaloz M, Martínez-Herranz R, Cañón E, Graña O, Horcajada-Reales C, Alonso-Curbelo D, Calvo TG, Gómez-López G, Bellora N, Riveiro-Falkenbach E, Ortiz-Romero PL, Rodríguez-Peralto JL, Maestre L, Roncador G, de Agustín Asensio JC, Goding CR, Eyra E, Megías D, Méndez R, Soengas MS. Lineage-specific roles of the cytoplasmic polyadenylation factor CPEB4 in the regulation of melanoma drivers. *Nat Commun.* 2016 Nov 18;7:13418

## RAT Monoclonal Antibody



### E2F1

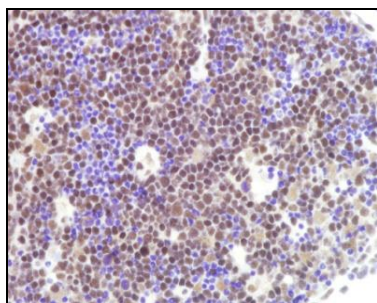
<b>TYPE:</b>	RAT monoclonal
<b>CLONE:</b>	Agro 368C
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Transcription factor E2F1 is a protein that in humans is encoded by the E2F1 gene. The E2F family plays a crucial role in the control of cell cycle and action of tumor suppressor proteins and is also a target of the transforming proteins of small DNA tumor viruses.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:7 supernatant	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:5 supernatant	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



### E4F1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	272G
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

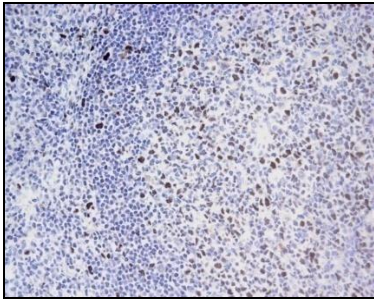
E4F1 is a ubiquitously expressed 120 kDa zinc-finger protein of the GLI/Kruppel family that was first identified as a cellular target of the viral oncoprotein E1A13S, required for both transcriptional activation and repression of adenoviral genes. Several recent observations suggest that E4F1 also plays important roles during normal cell proliferation and survival.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:50 supernatant	EDTA or Tris-EDTA
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:20	
<b>IP</b>	1:20	

## Mouse Monoclonal Antibody

## EED



<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	163C and 41D
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a (163C) and IgG2a (41D)
<b>REACTS WITH:</b>	Human and mouse

This gene encodes a member of the Polycomb-group (PcG) family. PcG family members form multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes over successive cell generations.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:100	
<b>IHC-P</b>	1:100 supernatant	Citate or Tris-EDTA
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:50	
<b>IP</b>	1:50	

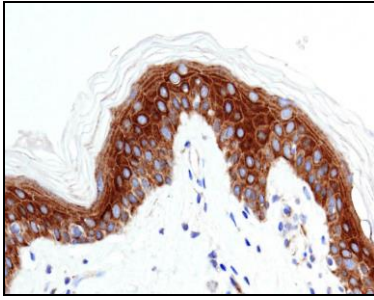
**Commercialized by:** Active Motif and Abcam.

### REFERENCES

Jiali Li, Ronald P Hart, Elyse M Mallimo, Mavis R Swerdel, Alexander W Kusnecov, Karl Herrup. EZH2-mediated H3K27 trimethylation mediates neurodegeneration in ataxia-telangiectasia. *Nature Neuroscience*. 1 December 2013.

## Mouse Monoclonal Antibody

## EFNB2



<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	EFR163M
<b>CONTROL:</b>	Skin
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

EphrinB2, a transmembrane ligand, is expressed by arteries but not veins, whereas one of its receptors, the tyrosine kinase EphB4, is more abundantly expressed by veins than by arteries. The genes ephrinB2 and ephrinB4 are also essential for proper development of the cardiovascular system. Targeted null mutations in these genes cause embryonic lethality, accompanied by defects in angiogenic remodelling of the peripheral vasculature and defective myocardial trabeculation in the heart.

APPLICATIONS	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	1:2 supernatant	ER1 30min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** Sigma

## REFERENCES

Thomas MG, Saldanha M, Mistry RJ, Dexter DT, Ramsden DB, Parsons RB. Nicotinamide N-methyltransferase expression in SH-SY5Y neuroblastoma and N27 mesencephalic neurones induces changes in cell morphology via ephrin-B2 and Akt signalling. *Cell Death & Disease*, June 2013.

Andrew C McClelland, Sean I Sheffler-Collins, Matthew S Kayser, Matthew B Dalva. Ephrin-B1 and ephrin-B2 mediate EphB-dependent presynaptic development via syntenin-1. *Proceedings of the National Academy of Sciences of the United States of America*. 1 December 2009

Yuichi Oike, Yasuhiro Ito, Koichi Hamada, Xiu-Qin Zhang, Keishi Miyata, Fumio Arai, Tomohisa Inada, Kimi Araki, Naomi Nakagata, Motohiro Takeya, Yaz Y Kisanuki, Masashi Yanagisawa, Nicholas W Gale, Toshio Suda. Regulation of vasculogenesis and angiogenesis by EphB/ephrin-B2 signaling between endothelial cells and surrounding mesenchymal cells. *Blood*. 15 August 2002.

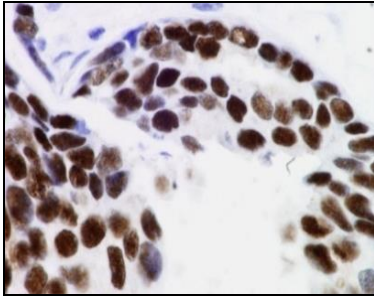
N W Gale, G D Yancopoulos. Growth factors acting via endothelial cell-specific receptor tyrosine kinases: VEGFs, angiopoietins, and ephrins in vascular development. *Genes and Development*. 1 May 1999.

E Stein, A A Lane, D P Cerretti, H O Schoecklmann, A D Schroff, R L Van Etten, T O Daniel. Eph receptors discriminate specific ligand oligomers to determine alternative signaling complexes, attachment, and assembly responses. *Genes and Development*. 1 March 1998.

## Mouse Monoclonal Antibody

# Estrogen Receptor

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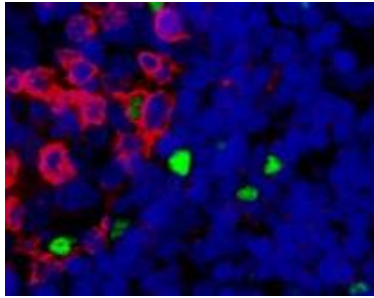
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	CRET94D
<b>CONTROL:</b>	Breast carcinoma
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

Anti-Estrogen Receptor 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 tumours indicates an increased likelihood of response to anti-estrogen (e.g. tamoxifen) therapy.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:5	
<b>IHC-P</b>	1:40 supernatant	ER2 20min Novolink
	1:10 supernatant	ER1 30min Novolink
<b>Elisa</b>	Not done	
<b>IF</b>	Not done	
<b>WB</b>	1:5	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## FOXP3

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	86D, 150D, 157B, 206D, 259D, 236A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

FoxP3 is a forkhead-family transcription factor that negatively regulates T cell function. Mice carrying a loss-of-function mutation in FoxP3 present with fatal autoimmune-like disease caused by hyperresponsive CD4(+) T cells. Mice that overexpress scurfin possess fewer mature T cells with reduced functional capabilities compared with normal littermate control mice. FoxP3 is critical for normal CD4+ T cell function and for the successful coordination of a normal response to immunological challenge in vivo.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	Neat supernatant	20 min ER2 Novolink
	1:100 purified	20 min ER2 Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	Citrate, EDTA
<b>WB</b>	1:2	
<b>IP</b>	1:2	

**Commercialized by:** BD, Biologend, ThermoFisher, Abcam and Beckman Coulter

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Raghavan S, Cao D, Widhe M, Roth K, Herrath J, Engström M, Roncador G, Banham AH, Trollmo C, Catrina AI, Malmström V. FOXP3 expression in blood, synovial fluid and synovial tissue during inflammatory arthritis and intra-articular corticosteroid treatment. *Ann Rheum Dis*. 2008 Dec 9.

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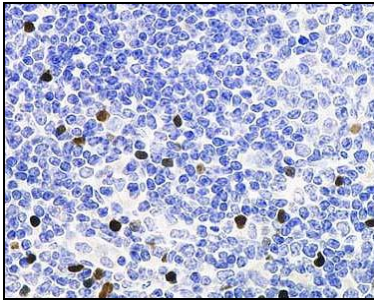
Klemke CD, Fritzsching B, Franz B, Kleinmann EV, Oberle N, Poenitz N, Sykora J, Banham AH, Roncador G, Kuhn A, Goerdts S, Krammer PH, Suri-Payer E. Paucity of FOXP3(+) cells in skin and peripheral blood distinguishes Sezary syndrome from other cutaneous T-cell lymphomas. *Leukemia*. 2006 Jun; 20(6): 1123-9.

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Roncador G, Brown PJ, Maestre L, Hue S, Martinez-Torrecuadrada JL, Ling KL, Pratap S, Toms C, Fox BC, Cerundolo V, Powrie F, Banham AH (2005). Analysis of FOXP3 protein expression in human CD4(+)CD25(+) regulatory T cells at the single-cell level. *Eur J Immunol* 2005 35:1681-1691.

## Mouse Monoclonal Antibody

# FOXP3 (Mouse specific)



<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	221D
<b>CONTROL:</b>	Mouse thymus
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	mouse

Mouse Foxp3 is a transcriptional regulator which is crucial for the development and inhibitory function of regulatory T-cells (Treg). Plays an essential role in maintaining homeostasis of the immune system by allowing the acquisition of full suppressive function and stability of the Treg lineage, and by directly modulating the expansion and function of conventional T-cells.

APPLICATIONS	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	Neat supernatant	20 min ER2 Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Neat	EDTA
<b>WB</b>	1:2	
<b>IP</b>	1:2	

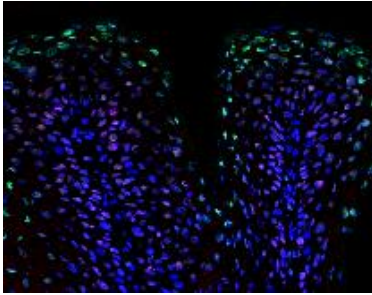
**Commercialized by:** ThermoFisher

## REFERENCES

Roncador G, Brown PJ, Maestre L, Hue S, Martinez-Torrecedradora JL, Ling KL, Pratap S, Toms C, Fox BC, Cerundolo V, Powrie F, Banham AH (2005). Analysis of FOXP3 protein expression in human CD4(+)CD25(+) regulatory T cells at the single-cell level. *Eur J Immunol* 2005 35:1681-1691.

## Rat Monoclonal Antibody

### FRA2 (Mouse specific)



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	REY146C
<b>CONTROL:</b>	Mouse epidermis
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	mouse

FRA2 an oncogenic transcription factor of the bZIP family, Fos subfamily. Fos proteins dimerize with Jun proteins (c-Jun, JunB, and JunD) to form Activator Protein-1 (AP-1), a transcription factor that binds to TRE/AP-1 elements and activates transcription.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:150 supernatant	OminMap Standard (Ventana)
<b>Elisa</b>	1:1000	
<b>IF</b>	1:50	
<b>WB</b>	1:100	
<b>IP</b>	Not done	

**Commercialized by:** Millipore

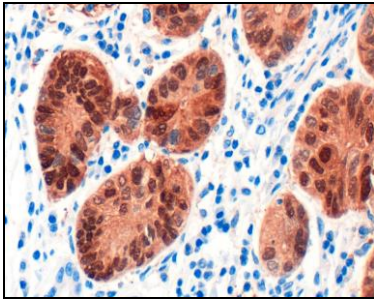
#### REFERENCES

Wurm S, Zhang J, Guinea-Viniegra J, García F, Muñoz J, Bakiri L, Ezhkova E, Wagner EF. Terminal epidermal differentiation is regulated by the interaction of Fra-2/AP-1 with Ezh2 and ERK1/2. *Genes dev.* 2015 Jan 15;29(2):144-56

## Mouse Monoclonal Antibody

# GASDERMIN (GSDMB)

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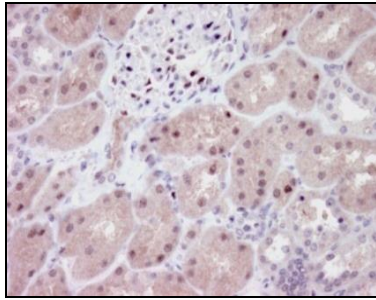
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	GAS120C
<b>CONTROL:</b>	Breast tumor
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Human

This gene encodes a member of the gasdermin-domain containing protein family. Other gasdermin-family genes are implicated in the regulation of apoptosis in epithelial cells, and are linked to cancer. Multiple transcript variants encoding different isoforms have been found for this gene.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:10 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	Citrate, EDTA
<b>WB</b>	1:10	
<b>IP</b>	1:10	

## Mouse Monoclonal Antibody



## GAPDH

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	FF26A
<b>CONTROL:</b>	Kidney
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) is well known as one of the key enzymes involved in glycolysis. Besides its functioning as a glycolytic enzyme in cytoplasm, recent evidence suggests that mammalian GAPDH is also involved in a great number of intracellular processes such as membrane fusion, microtubule bundling, phosphotransferase activity, nuclear RNA export, DNA replication, and DNA repair.

### APPLICATIONS

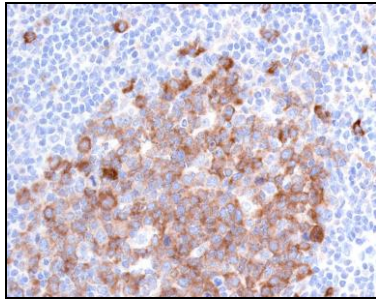
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	1:2 supernatant	EDTA
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	EDTA
<b>WB</b>	1:10	
<b>IP</b>	1:10	

**Commercialized by:** Biologend and eBioscience

### REFERENCES

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- Liu CC, Leclair P, Yap SQ, Lim CJ. The Membrane-Proximal KXGFFKR Motif of  $\alpha$ -Integrin Mediates Chemoresistance. *Molecular and Cellular Biology* on 1 November 2013.
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## Mouse Monoclonal Antibody



## GCET1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	RAM341
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

*GCET1* (germinal center B-cell expressed transcript 1) belongs to the SERPIN family of proteins and is located within a cluster of SERPIN genes on chromosome 14q32). This protein may play an important role in GC-B cell physiology. Its expression in lymphomas could be important in differential diagnosis and research.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not working	
<b>IHC-P</b>	1:4 supernatant	ER2 20min Novolink
	1:100 purified	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	
<b>WB</b>	1:10	
<b>IP</b>	1:10	

**Commercialized by:** Abcam and BD Bioscience

### REFERENCES

Montes-Moreno S, Roncador G, Maestre L, Martínez N, Sanchez-Verde L, Camacho F, Cannata J, Martínez-Torrecuadrada JL, Shen Y, Chan WC, Piris MA. *Gcet1* (centerin), a highly restricted marker for a subset of Germinal Centre-derived lymphomas. *Blood*. (2008) 1; 111(1): 351-8.

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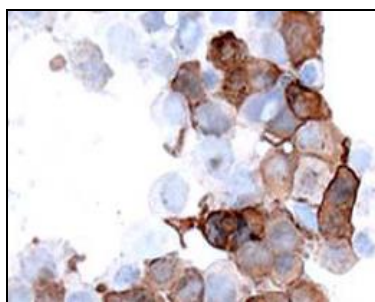
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## Rat Monoclonal Antibody



## GFP

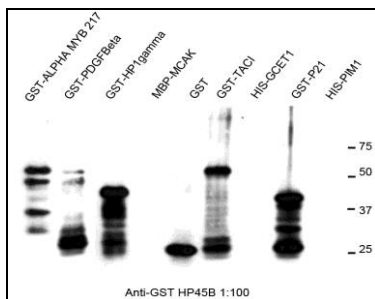
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	LAS325
<b>CONTROL:</b>	GFP protein
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Jellyfish

Energy-transfer acceptor. Its role is to transduce the blue chemiluminescence of the protein aequorin into green fluorescent light by energy transfer. Fluoresces in vivo upon receiving energy from the Ca<sup>2+</sup>-activated photoprotein aequorin.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2 supernatant	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:2 supernatant	
<b>IF</b>	1:2 supernatant	
<b>WB</b>	1:10000 purified	
<b>IP</b>	1:50 purified	

## Rat Monoclonal Antibody



## GST

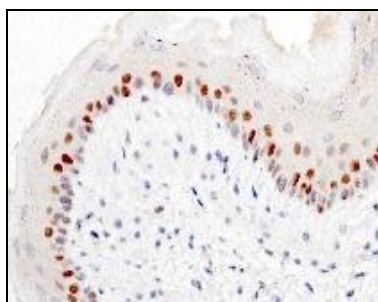
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	HP45B
<b>CONTROL:</b>	N/A
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	GST protein

This antibody was generated against a GST fusion protein and is effective for analyzing, characterizing and purifying fusion proteins containing GST.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	N/A	
<b>IHC-P</b>	N/A	
<b>Elisa</b>	1:1000	
<b>IF</b>	N/A	
<b>WB</b>	1:100	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## HES1 (Mouse specific)

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	HS395A
<b>CONTROL:</b>	skin
<b>LOCALIZATION:</b>	nuclear
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Mouse and human

HES1 belongs to a family of basic helix-loop-helix (bHLH) proteins that are essential for neurogenesis, myogenesis, hematopoiesis, and sex determination. HES1 is a transcriptional repressor for a number of genes, but it can also function as a transcriptional activator

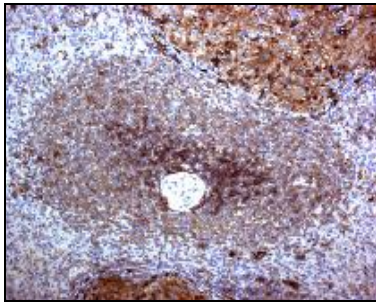
### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	N/A	
<b>IHC-P</b>	1:100	1 CC1m RbaRtBiot+OMNI RBB
<b>Elisa</b>	1:1000	
<b>IF</b>	N/A	
<b>WB</b>	1:30	
<b>IP</b>	Not done	

### REFERENCES

Maraver A, Fernandez-Marcos PJ, Cash TP, Mendez-Pertuz M, Dueñas M, Maietta P, Martinelli P, Muñoz-Martin M, Martínez-Fernández M, Cañamero M, Roncador G, Martínez-Torrecuadrada JL, Grivas D, de la Pompa JL, Valencia A, Paramio JM, Real FX, Serrano M. NOTCH pathway inactivation promotes bladder cancer progression. *J Clin Invest*. 2015 Feb;125(2):824-30.

## Mouse Monoclonal Antibody



## HLA, DP-DR

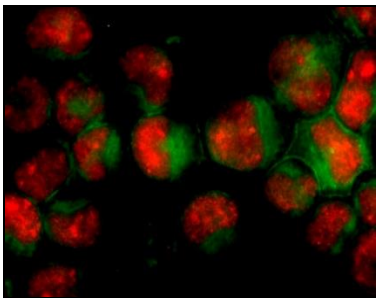
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	JS76
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

Recognise a 26-28kDa protein, identified as HLA-DP, DQ, and DR. It plays a central role in the immune system by presenting peptides derived from extracellular proteins. Class II molecules are expressed in antigen presenting cells (APC: B lymphocytes, dendritic cells, macrophages).

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	1:100	
IHC-P	1:400 supernatant	ER1 30min Novolink
Elisa	1:1000	
IF	1:60	Citrate, EDTA
WB	1:10	
IP	1:10	

## Rat Monoclonal Antibody



## HP-1 alpha

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	HP330A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

Heterochromatin protein-1 (HP1) is a methyl-lysine binding protein localized at heterochromatin sites, where it mediates gene silencing. HP-1alpha is involved in the formation of functional kinetochores through interaction with MIS12 complex proteins. HP-1alpha also interacts with lamin B receptor, contributing to the association of the heterochromatin with the inner nuclear membrane.

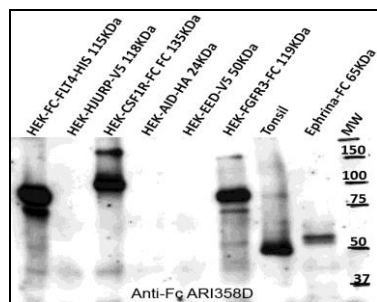
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not done	
IHC-P	1:20 supernatant	ER2 20 min Novolink
Elisa	1:1000	
IF	Not done	
WB	1:2	
IP	Not done	

Commercialized by: Abcam

## Rat Monoclonal Antibody

### IgG (Fc specific)



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	ARI358D
<b>CONTROL:</b>	N/A
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Fc region of human IgG1

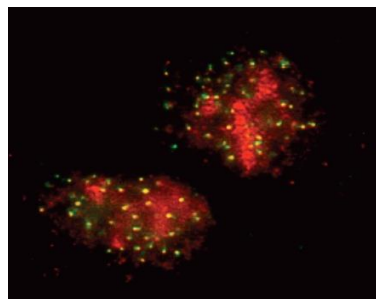
This monoclonal antibody reacts with human IgG (Fc) region.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Neat (supernatant)	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat (supernatant)	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody

### HJURP



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	HOPE144K
<b>CONTROL:</b>	Hela cell line
<b>LOCALIZATION:</b>	Centromere
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Human

Centromeric protein that plays a central role in the incorporation and maintenance of histone H3-like variant CENPA at centromeres. Acts as a specific chaperone for CENPA and is required for the incorporation of newly synthesized CENPA molecules into nucleosomes at replicated centromeres.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:30 supernatant	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	1:30 supernatant	
<b>WB</b>	Neat (supernatant) 1:600 (purified mAb)	
<b>IP</b>	1:5 supernatant	

Commercialized by: Millipore

## Rat Monoclonal Antibody



## KLH

	Pantoth-KLH	KLH	BSA
1/10	0,433	1,579	0,056
1/20	0,355	1,359	0,051
1/40	0,244	1,012	0,052
1/80	0,167	0,708	0,058
1/160	0,11	0,43	0,051
1/320	0,08	0,273	0,052
PBS	0,049	0,048	0,057
Ab BSA 1/200	0,055	0,055	1,169
	184C/C8		

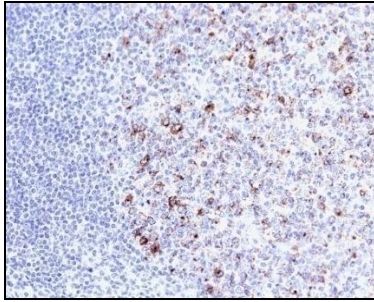
**TYPE:** Rat monoclonal  
**CLONE:** 184C  
**CONTROL:** KLH protein  
**LOCALIZATION:** N/A  
**ISOTYPE:** IgG2b  
**REACTS WITH:** Megathura Crenulata

Keyhole limpet hemocyanin (KLH) is a large, multisubunit, oxygen-carrying, metalloprotein that is found in the hemolymph of the giant keyhole limpet, *Megathura crenulata*, a species of keyhole limpet that lives off the coast of California, from Monterey Bay to Isla Asuncion off Baja California.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not done	
IHC-P	Not done	
Elisa	1:1000	
IF	Not done	
WB	Not done	
IP	Not done	

## Mouse Monoclonal Antibody



## KLHL-6

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	92C
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic (Golgi)
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Kelch-like protein 6 (KLHL6) is a BTB-kelch protein with a lymphoid tissue-restricted expression pattern. In the B-lymphocyte lineage, KLHL6 is expressed throughout ontogeny, and KLHL6 expression is strongly upregulated in germinal center (GC) B cells.

### APPLICATIONS

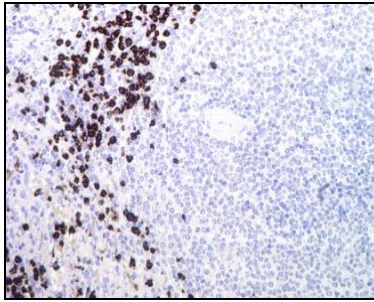
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not working	
<b>IHC-P</b>	1:3 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	1:10	
<b>IP</b>	Not done	

**Commercialized by:** BD Bioscience

### REFERENCES

Nam-Cha SH, Montes-Moreno S, Salcedo MT, Sanjuan J, Garcia JF and Piris MA. Lymphocyte-rich classical Hodgkin's lymphoma: distinctive tumor and microenvironment markers. *Modern Pathology* (2009) 22, 1006–1015.

## Mouse Monoclonal Antibody



## LCN-2

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	HAT265B
<b>CONTROL:</b>	Bone marrow
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Lipocalin-2 (LCN2), also known as NGAL, is a protein associated with neutrophil gelatinase. The 25-kD LCN2 protein is believed to bind small lipophilic substances such as bacteria-derived lipopolysaccharide (LPS) and formylpeptides and may function as a modulator of inflammation.

### APPLICATIONS

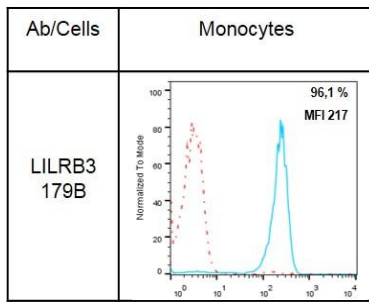
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2 supernatant	Citrate, EDTA
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** BD Bioscience

### REFERENCES

Madoz-Gúrpide J, López-Serra P, Martínez-Torrecuadrada JL, Sánchez L, Lombardía L, Casal JI. Proteomics-based validation of genomic data: applications in colorectal cancer diagnosis. *Mol Cell Proteomics*. 2006. Aug; 5(8):1471-83.

## Mouse Monoclonal Antibody



## CD85A/B (LILRB3/LILRA6)

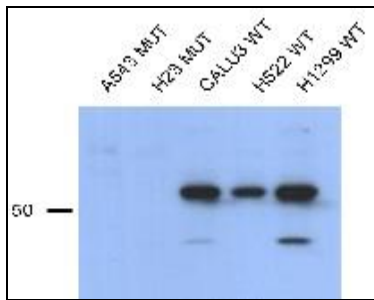
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	FANI179B
<b>CONTROL:</b>	Monocytes
<b>LOCALIZATION:</b>	membrane
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

May act as receptor for class I MHC antigens. Becomes activated upon coligation of LILRB3 and immune receptors, such as FCGR2B and the B-cell receptor. Down-regulates antigen-induced B-cell activation by recruiting phosphatases to its immunoreceptor tyrosine-based inhibitor motifs (ITIM).

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>Flow Cytometry</b>	1:2 supernatant	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	Not working	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## LKB1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	Ley 37D
<b>CONTROL:</b>	Breast
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Human

The LKB/STK11 gene encodes a 55kDa serine/threonine protein kinase. LKB could act as a recessive tumour suppressor gene.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:100	
<b>IP</b>	Not done	

**Commercialized by:** Abcam, Sigma, Biologend, SantaCruz and BD Bioscience

### REFERENCES (more than 20 citations)

Katia Bouchekioua-Bouzaghrou, Coralie Poulard, Juliette Rambaud, Emilie Lavergne, Nader Hussein, Marc Billaud, Thomas Bachelot, Sylvie Chabaud, Sylvie Mader, Guila Dayan, Isabelle Treilleux, Laura Corbo, Muriel Le Romancer. LKB1 when associated with methylatedERa is a marker of bad prognosis in breast cancer. *International Journal of Cancer*. 15 September 2014.

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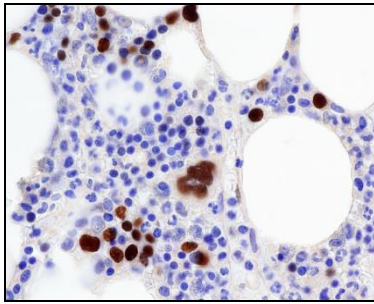
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Carretero J, Medina PP, Blanco R, Smit L, Tang M, Roncador G, Maestre L, Conde E, López-Ríos F, Clevers HC and Sánchez-Céspedes M. Dysfunctional AMPK activity, signalling through mTOR and survival in response to energetic stress in LKB1-deficient lung cancer. *Oncogene*. 2007 Mar 8;26(11):1616-25.

## Mouse Monoclonal Antibody



## LMO2

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	229B
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

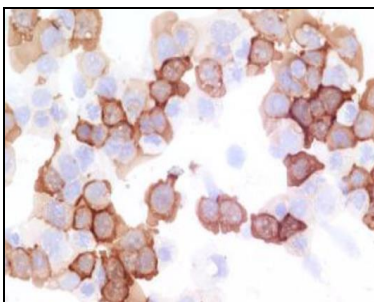
LMO2 protein is expressed as a nuclear marker in normal germinal-center (GC) B cells and GC-derived B-cell lines and in a subset of GC-derived B-cell lymphomas. LMO2 is expressed in erythroid and myeloid precursors and in megakaryocytes and also in lymphoblastic and acute myeloid leukemias. It is rarely expressed in mature T, natural killer (NK), and plasma cell neoplasms and is absent from nonhematolymphoid tissues except for endothelial cells.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:10	
<b>IHC-P</b>	1:20 supernatant 1: 100 Purified	15 min ER2 Novolink 15 min ER2 Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:10	
<b>IP</b>	Not Done	

**Commercialized by:** Millipore.

## Rat Monoclonal Antibody



## Luciferase

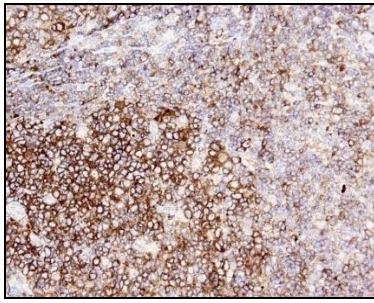
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	LAS126A
<b>CONTROL:</b>	Luciferase positive tissue
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Firefly

Firefly luciferase is the light-emitting enzyme responsible for the bioluminescence of fireflies and click beetles. The enzyme catalyses the oxidation of firefly luciferin, requiring oxygen and ATP. Because of the requirement of ATP, firefly luciferases have been used extensively in biotechnology.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:10 supernatant	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:10000 purified	
<b>IP</b>	Not Done	

## Mouse Monoclonal Antibody



## MALT-1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	31E
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Human

This gene has been found to be recurrently rearranged in chromosomal translocation with two other genes baculoviral IAP repeat-containing protein 3 (also known as apoptosis inhibitor 2) and immunoglobulin heavy chain locus in mucosa-associated lymphoid tissue lymphomas.

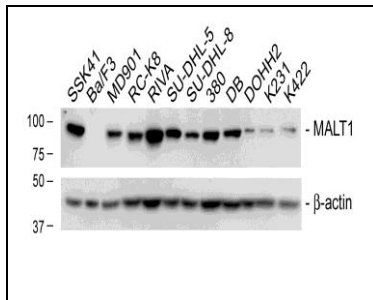
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not working	
<b>IHC-P</b>	1: 400 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	1:10	
<b>IP</b>	Not Done	

**Commercialized by:** Sigma-Aldrich.

## Mouse Monoclonal Antibody

## MALT-1



**TYPE:** Mouse monoclonal  
**CLONE:** RON 169A  
**CONTROL:** SSK41 Cell line  
**LOCALIZATION:** Cytoplasmic  
**ISOTYPE:** IgG1  
**REACTS WITH:** Human

Two characteristic chromosome aberrations, t(11;18)(q21;q21) and t(1;14)(p22;q32), have been implicated in the pathogenesis of malignant lymphoma of mucosa-associated lymphoid tissue (MALT). t(11;18)(q21;q21) results in the fusion of 2 genes, the API2 gene at 11q21 and the MALT1 gene at 18q21. In t(1;14)(p22; q32), the entire BCL10 gene at 1p22 is juxtaposed to the Ig-heavy-chain-gene enhancer at 14q32, resulting in its overexpression.

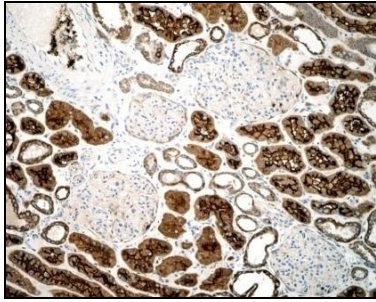
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not working	
IHC-P	Not working	
Elisa	1:1000	
IF	Not working	
WB	1:2	
IP	1:2	

### REFERENCES

Maestre L, Fontan L, Martinez-Climent JA, Garcia JF, Cigudosa JC, Roncador G. Generation of a new monoclonal antibody against MALT1 by genetic immunization. Hybridoma (Larchmt). 2007 Apr;26(2):86-91.

## Mouse Monoclonal Antibody



## MAP-17

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	165A
<b>CONTROL:</b>	Kidney
<b>LOCALIZATION:</b>	cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

MAP17 is a small non-glycosylated membrane-associated protein of 17 kDa that localizes to the plasma membrane and the Golgi apparatus. MAP-17 protein is expressed abundantly in carcinomas arising from kidney, colon, lung, and breast. In normal tissues it is expressed in significant amounts in the kidney.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:10	
<b>IHC-P</b>	1:10 supernatant	20 min ER2
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** Millipore

### REFERENCES

MAP17 and SGLT1 protein expression levels as prognostic markers for cervical tumor patient survival. Perez M, Praena-Fernandez JM, Felipe-Abrio B, Lopez-Garcia MA, Lucena-Cacace A, Garcia A, Lleonart M, Roncador G, Marin JJ, Carnero A. *PLoS One*. 2013;8(2).

MAP17 and the double-edged sword of ROS. Carnero A. *Biochim Biophys Acta*. 2012 Aug;1826(1):44-52.

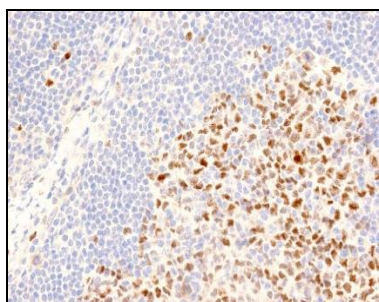
p38a limits the contribution of MAP17 to cancer progression in breast tumors. Gujjarro MV, Vergel M, Marin JJ, Muñoz-Galván S, Ferrer I, Ramon y Cajal S, Roncador G, Blanco-Aparicio C, Carnero A. *Oncogene*. 2012 Oct 11;31(41):4447-59.

MAP17 inhibits Myc-induced apoptosis through PI3K/AKT pathway activation. Gujjarro MV, Link W, Rosado A, Leal JF, Carnero A. *Carcinogenesis*. 2007 Dec;28(12):2443-50.

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## Mouse Monoclonal Antibody



## MASTL

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE: :</b>	RIPLY 74C
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear and cytoplasmic
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

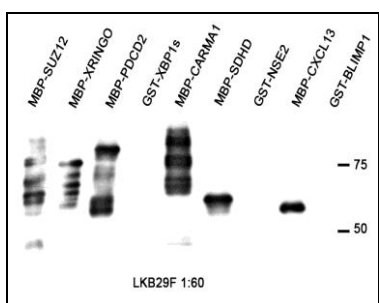
MASTL (microtubule associated serine/threonine kinase-like), also known as GW, THC2 or serine/threonine-protein kinase greatwall, is an 879 amino acid serine/threonine kinase regulates mitosis entry and maintenance. Depletion of MASTL delays the G2-to-M phase transition, is linked to a prolonged mitosis and sensitizes cells to mitotic death.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2 supernatant	
<b>IHC-P</b>	1:15 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:100	
<b>IF</b>	Not done	
<b>WB</b>	1:2 supernatant 1:50 purified mAb	
<b>IP</b>	Not done	

**Commercialized by:** Abcam

## Mouse Monoclonal Antibody



## MBP

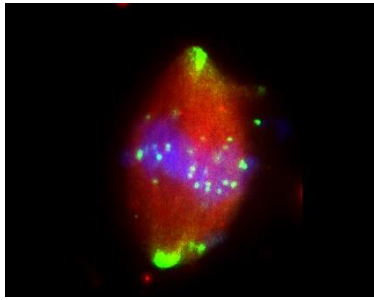
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	LKB29F
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Maltose Binding Protein

Maltose Binding Protein (MBP) is a part of the maltose/maltodextrin system of Escherichia coli bacteria, which is responsible for the uptake and efficient catabolism of maltodextrins. MBP is often used as a fusion partner for recombinant protein expression.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:60	
<b>IP</b>	Not Done	

## Mouse Monoclonal Antibody



## MCAK (Xenopus)

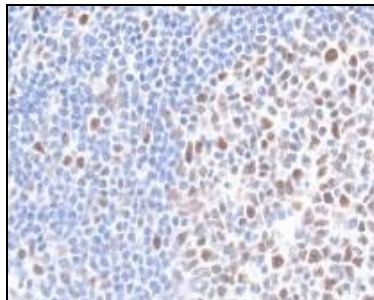
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	TITA87B
<b>CONTROL:</b>	Xenopus tissue
<b>LOCALIZATION:</b>	Cytoplasm
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Xenopus tissue

MCAK is an ATPase that catalytically depolymerizes microtubules by accelerating (100-fold) the rate of dissociation of tubulin from microtubule ends. MCAK is expressed at high levels in thymus and testis, at low levels in small intestine, the mucosal lining of colon, and placenta, and at very low levels in spleen and ovary; expression is not detected in prostate, peripheral blood Leukocytes, heart, brain, lung, liver, skeletal muscle, kidney or pancreas.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Neat	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## MCRS1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	MOHA43B, DON139B
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

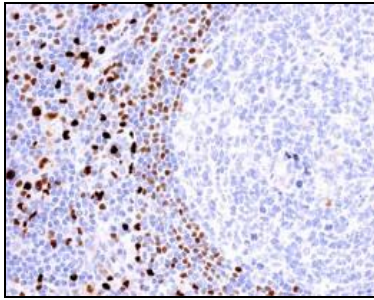
MCRS1 (microspherule protein 1) is a 462 amino acid protein that localizes to the nucleus and contains one FHA domain. Expressed at high levels during the S phase of the cell cycle and present in testis, prostate, thymus, spleen and colon, MSP58 functions to modulate the transcriptional activity of Daxx (a transcriptional repressor) by recruiting Daxx to the nucleolus.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:10 supernatant	ER2 15 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:20	
<b>IP</b>	Not done	

**Commercialized by:** Millipore.

## Mouse Monoclonal Antibody



## MNDA

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	253A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

MNDA (myeloid cell nuclear differentiation antigen) is a 55kDa nuclear protein constitutively expressed in myelomonocytic leukemia cells, myelomonocytic cell lines, and normal peripheral blood granulocytes and monocytes. A low level of expression has also been found in a population of mantle B lymphocytes but no expression exists in germinal centre cells or plasma cells.

### APPLICATIONS

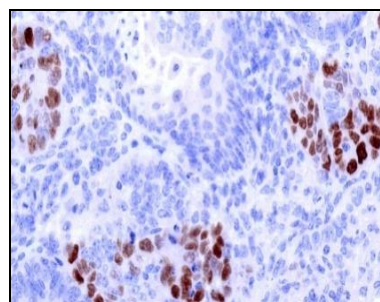
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:30	
<b>IHC-P</b>	1:10 supernatant	ER2 15 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:20	
<b>IP</b>	Not done	

**Commercialized by:** Abcam and BD Bioscience

### REFERENCES

Kanellis G, Roncador G, Arribas A, Mollejo M, Montes-Moreno S, Maestre L, Campos-Martin Y, Martinez-Torrecuadrada JL, Sanchez-Verde L, Pajares R, Cigudosa JC, Martin MC and Piris MA. Identification of MNDA as a new marker for Nodal Marginal Zone Lymphoma. Leukemia. 2009 Oct;23(10):1847-57.

## Rat Monoclonal Antibody



## NANOG (Mouse specific)

<b>TYPE:</b>	Rat monoclonal
<b>CLONE: :</b>	NF1, NF238 and SER211
<b>CONTROL:</b>	Mouse theraoma
<b>LOCALIZATION:</b>	Nuclear and cytoplasmic
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Mouse

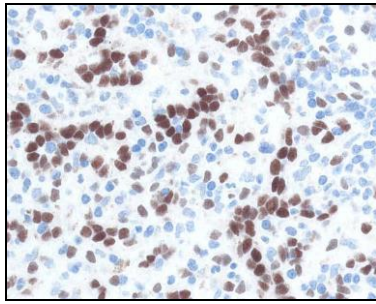
Transcription regulator involved in inner cell mass and embryonic stem (ES) cells proliferation and self-renewal. Imposes pluripotency on ES cells and prevents their differentiation towards extraembryonic endoderm and trophoctoderm lineages. Blocks bone morphogenetic protein-induced mesoderm differentiation of ES cells by physically interacting with SMAD1 and interfering with the recruitment of coactivators to the active SMAD transcriptional complexes. Acts as a transcriptional activator or repressor.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2 supernatant	CC1m 60' det3+OR (Ventana)
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2 supernatant	
<b>IP</b>	Not Done	

Commercialized by: Biolegend

## Mouse Monoclonal Antibody



## NKX2-3

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	5GAL454C/H9
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

NKX2-3 gene is a member of the homeobox, NKX family. The gene encodes a homeodomain-containing transcription factor. GO (gene ontology) annotations related to this gene include sequence-specific DNA binding and gene-specific transcription factor activity. NKX2-3 is essential for normal development and functions of the small intestine and spleen of embryonic and adult mice. Disruption of Nkx2-3 in mice results in postnatal lethality and abnormal development of the small intestine and the spleen.

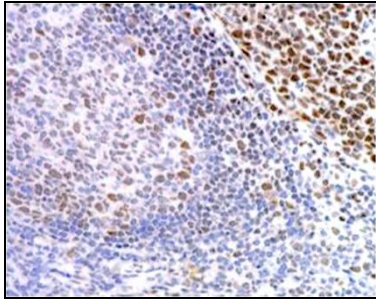
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:5 supernatant	
<b>IHC-P</b>	1:5 supernatant	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:5 supernatant	
<b>IP</b>	1:5 supernatant	

### REFERENCES

Eloy F. Robles, María Mena-Varas, Laura Barrio, Sara V. Merino-Cortes, Péter Balogh, Ming-Qing Du, Takashi Akasaka, Anton Parker, Sergio Roa, Carlos Panizo, Idoia Martín-Guerrero, Reiner Siebert, Victor Segura, Xabier Agirre, Laura Macri-Pellizeri, Beatriz Aldaz, Amaia Vilas-Zornoza, Shaowei Zhang, Sarah Moody, María Jose Calasanz, Thomas Tousseyn, Cyril Broccardo, Pierre Brousset, Elena Campos-Sanchez, Cesar Cobaleda, Isidro Sanchez-Garcia, Jose Luis Fernandez-Luna, Ricardo Garcia-Muñoz, Esther Pena, Beatriz Bellosillo, Antonio Salar, María Joao Baptista, Jesús María Hernandez-Rivas, Marcos Gonzalez, María Jose Terol, Joan Climent, Antonio Ferrandez, Xavier Sagaert, Ari M. Melnick, Felipe Prosper, David G. Oscier, Yolanda R. Carrasco, Martin J. S. Dyer, and Jose A. Martinez-Climent. Homeobox NKX2-3 promotes marginal-zone lymphomagenesis by activating B-cell receptor signalling and shaping lymphocyte dynamics. *Nat Commun.* 2016; 7 :11889.

## Mouse Monoclonal Antibody



## NSE2 (NSMCE2)

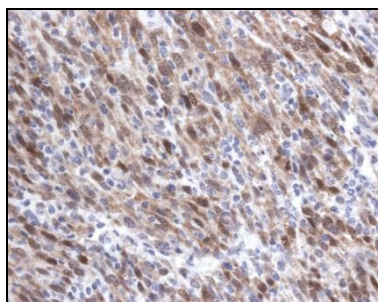
<b>TYPE:</b>	Mouse Monoclonal
<b>CLONE:</b>	215C
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

E3 SUMO-protein ligase component of the SMC5-SMC6 complex, a complex involved in DNA double-strand breaks by homologous recombination. The complex may promote sister chromatid homologous recombination by recruiting the SMC1-SMC3 cohesin complex to double-strand breaks. Acts as a E3 ligase mediating SUMO attachment to various proteins such as SMC6L1 and TRAX, and maybe the cohesin components RAD21 and STAG2. SUMO protein-ligase activity is required for the prevention of DNA damage-induced apoptosis by facilitating DNA repair.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## p15 (CDKN2B) (Mouse specific)

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	PAT65B
<b>CONTROL:</b>	Mouse fibrosarcoma
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Mouse

This gene lies adjacent to the tumor suppressor gene *CDKN2A* in a region that is frequently mutated and deleted in a wide variety of tumors. This gene encodes a cyclin-dependent kinase inhibitor, which forms a complex with *CDK4* or *CDK6*, and prevents the activation of the *CDK* kinases, thus the encoded protein functions as a cell growth regulator that controls cell cycle G1 progression.

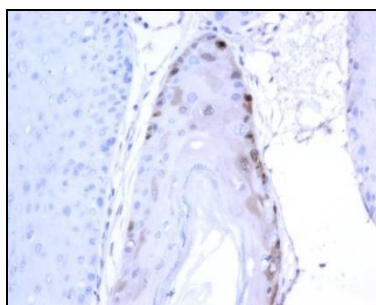
### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2	CC1 st Rbt Biot+OmniRbb
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

### REFERENCES

Muñoz-Espín D, Cañamero M, Maraver A, Gómez-López G, Contreras J, Murillo-Cuesta S, Rodríguez-Baeza A, Varela-Nieto I, Ruberte J, Collado M, Serrano M. Programmed cell senescence during mammalian embryonic development. *Cell*. 2013 Nov 21;155(5):1104-18.

## Rat Monoclonal Antibody



## p16 (CDKN2A) (Mouse specific)

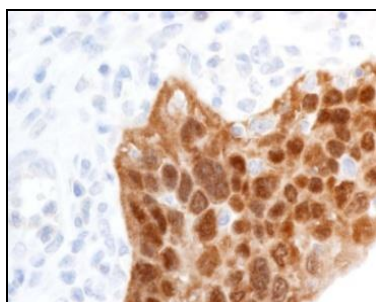
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	CAR327C
<b>CONTROL:</b>	Mouse papilloma
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Mouse

p16 (also known as cyclin-dependent kinase inhibitor 2A, multiple tumor suppressor 1 and as several other synonyms), is a tumor suppressor protein, that in humans is encoded by the CDKN2A gene. p16 plays an important role in cell cycle regulation by decelerating cells progression from G1 phase to S phase, and therefore acts as a tumor suppressor that is implicated in the prevention of cancers, notably melanoma, oropharyngeal squamous cell carcinoma, cervical cancer, and esophageal cancer.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:5	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## p15/p16

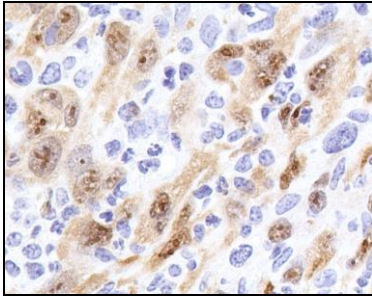
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	PAB228C
<b>CONTROL:</b>	Human Cervix Carcinoma
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

Both p16 and p15, encoded by genes located on chromosome 9p21, are inhibitors of cyclin-dependent kinases 4/6 (CDK4/6) and upstream regulators of RB function, and set up the RB/p16 tumor suppressive pathway, which is abrogated frequently in human neoplasms. In hematological malignancies, deletion of p16/p15 locus has been shown to be highly specific to lymphoid malignancies, and more particularly to T-cell acute lymphoblastic leukemia (T-ALL).

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:10 supernatant	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## p19 (CDKN2A-ARF) (Mouse specific)

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	PIL346
<b>CONTROL:</b>	Mouse fibrosarcoma
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	mouse

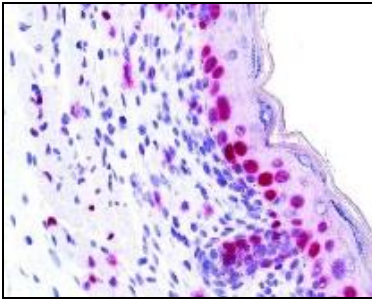
ARF (known as p14ARF in human and p19ARF in mouse) was originally identified as an alternative transcript of the INK4b- ARF-INK4a locus located on human chromosome 9p21. This locus encodes two members of the INK4 family of cyclin-dependent kinase inhibitors, p15 INK4b and p16 INK4a, that regulate progression through the G1 phase of the cell cycle.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Neat supernatant	CC1 st Rbt Biot+OmniRbb
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat supernatant	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody

### p21 (Mouse specific)



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	HUGO291
<b>CONTROL:</b>	Mouse skin
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE</b>	IgG2a
<b>REACTS WITH:</b>	Mouse

This gene encodes a potent cyclin-dependent kinase inhibitor. The encoded protein binds to and inhibits the activity of cyclin-CDK2 or CDK4 complexes, and thus functions as a regulator of cell cycle progression at G1. The expression of this gene is tightly controlled by the tumor suppressor protein p53, through which this protein mediates the p53-dependent cell cycle G1 phase arrest in response to a variety of stress stimuli.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:10 supernatant	CC1m 60' det3+OR (Ventana)
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** Abcam.

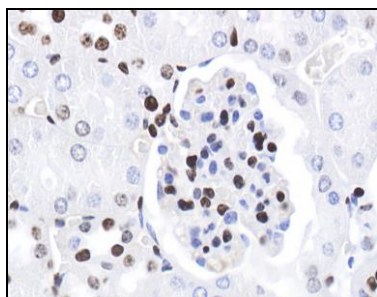
#### REFERENCES

Muñoz-Espín D, Cañamero M, Maraver A, Gómez-López G, Contreras J, Murillo-Cuesta S, Rodríguez-Baeza A, Varela-Nieto I, Ruberte J, Collado M, Serrano M. Programmed cell senescence during mammalian embryonic development. *Cell*. 2013 Nov 21;155(5):1104-18.

Le Roux I, Konge J, Le Cam L, Flamant P, Tajbakhsh S. Numb is required to prevent p53-dependent senescence following skeletal muscle injury. *Nat Commun*. 2015 Oct 27; 6:8528.

## Rat Monoclonal Antibody

### p27(Mouse specific)



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	SON82B
<b>CONTROL:</b>	Mouse kidney
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE</b>	IgG2a
<b>REACTS WITH:</b>	Mouse

Cyclin-dependent kinase inhibitor 1B (p27Kip1) is an enzyme inhibitor that in humans is encoded by the CDKN1B gene. It encodes a protein which belongs to the Cip/Kip family of cyclin dependent kinase (Cdk) inhibitor proteins. The encoded protein binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, and thus controls the cell cycle progression at G1.

#### APPLICATIONS

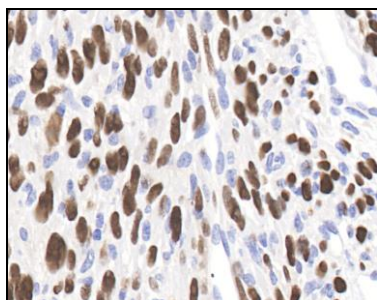
	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:100	RiboCC 40min RbcRTbIOT+Omni Rbb
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

#### REFERENCES

Muñoz-Espín D, Cañamero M, Maraver A, Gómez-López G, Contreras J, Murillo-Cuesta S, Rodríguez-Baeza A, Varela-Nieto I, Ruberte J, Collado M, Serrano M. Programmed cell senescence during mammalian embryonic development. *Cell*. 2013 Nov 21;155(5):1104-18.

## Rat Monoclonal Antibody

### p53 (Mouse specific)



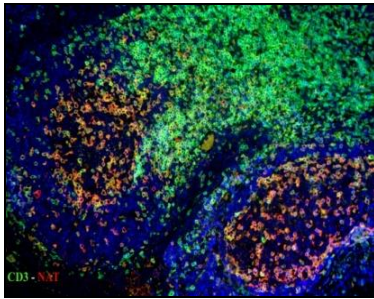
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	POE316A
<b>CONTROL:</b>	Mouse Fibrosarcoma
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE</b>	IgG2a
<b>REACTS WITH:</b>	Mouse

p53 also known as cellular tumor antigen p53 or phosphoprotein p53 or tumor suppressor p53 is a protein that in humans is encoded by the TP53 gene. The p53 protein is crucial in multicellular organisms, where it regulates the cell cycle and, thus, functions as a tumor suppressor, preventing cancer.

#### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2	RiboCC 60min RbcRtBiot+OR
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## PD1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	NAT105
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Membrane
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Programmed death-1 (PD-1) is a member of the immunoglobulin superfamily. It contains the immunoreceptor tyrosine-based inhibitory motif (ITIM) and plays a key role in peripheral tolerance and autoimmune disease. It is expressed by germinal center-associated T cells in reactive lymphoid tissue.

APPLICATIONS	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:5	
<b>IHC-P</b>	1:5 supernatant	ER2 20 min Novolink
	1:100 purified	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	
<b>WB</b>	1:100	
<b>IP</b>	1:100	

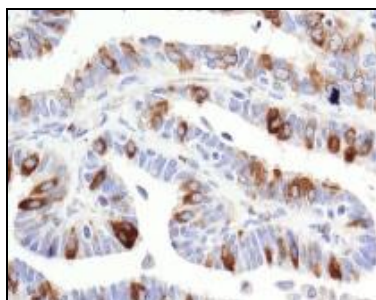
**Commercialized by:** Cell Marque, Abcam, Ventana, Biologend, Biocare and Dianova.

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- Nam-Cha SH, Roncador G, Sanchez-Verde L, Montes-Moreno S, Acevedo A, Domínguez-Franjo P, Piris MA. PD-1, a follicular T-cell marker useful for recognizing nodular lymphocyte-predominant Hodgkin lymphoma. *Am J Surg Pathol*. 2008 Aug;32(8):1252-7
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## Rat Monoclonal Antibody

## PDGF- $\beta$



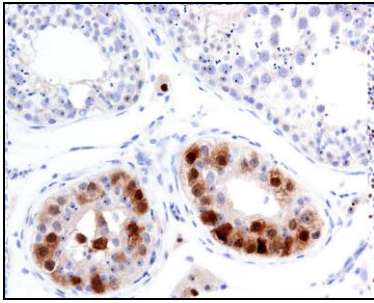
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	326A
<b>CONTROL:</b>	Kidney
<b>LOCALIZATION:</b>	Cytoplasmic
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Human

The protein encoded by this gene is a member of the platelet-derived growth factor family. The four members of this family are mitogenic factors for cells of mesenchymal origin and are characterized by a motif of eight cysteines. This gene product can exist either as a homodimer (PDGF-BB) or as a heterodimer with the platelet-derived growth factor alpha polypeptide (PDGF-AB), where the dimers are connected by disulfide bonds. Mutations in this gene are associated with meningioma. Reciprocal translocations between chromosomes 22 and 7, at sites where this gene and that for COL1A1 are located, are associated with a particular type of skin tumor called dermatofibrosarcoma protuberans resulting from unregulated expression of growth factor. Two alternatively spliced transcript variants encoding different isoforms have been identified for this gene.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	1:100	
<b>IHC-P</b>	1:30 supernatant	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:10	
<b>IP</b>	1:10	

## Rat Monoclonal Antibody



## PIM2

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	CHU61B
<b>CONTROL:</b>	Seminoma
<b>LOCALIZATION:</b>	Nuclear and cytoplasmic
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

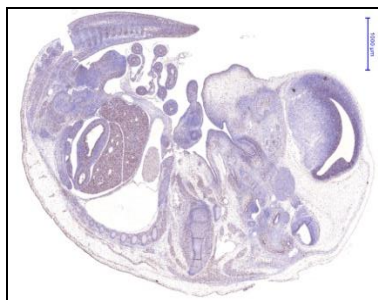
The Pim family of proto-oncogenes (Pim1, Pim2 and Pim3) encodes serine threonine kinases that are widely expressed in the hematopoietic system. Pim-2 is found to promote cell survival by activating NFkB survival pathway through both augmentation of IkbKinase activity and NFkB nuclear translocation.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:2 supernatant	ER2 10 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** Active Motif and Abcam.

## Rat Monoclonal Antibody



## PLK1

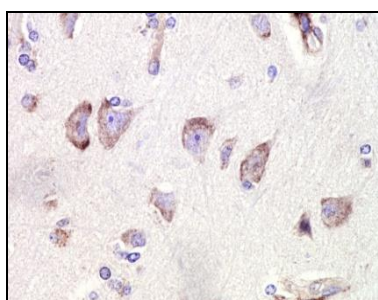
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	POE125A
<b>CONTROL:</b>	Embryonary tissue
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	Unknow
<b>REACTS WITH:</b>	Human and mouse

Plk1 is an early trigger for G2/M transition. Plk1 supports the functional maturation of the centrosome in late G2/early prophase and establishment of the bipolar spindle. Plk1 phosphorylates and activates cdc25C, a phosphatase that dephosphorylates and activates the cyclinB/cdc2 complex. Plk phosphorylates and activates components of the anaphase-promoting complex (APC).

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not done	
IHC-P	1:2	CC1 ST 60min RbcRtBiot+OR
Elisa	1:1000	
IF	Not done	
WB	1:2	
IP	Not done	

## Mouse Monoclonal Antibody



## PLK5

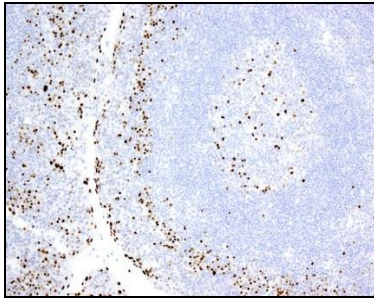
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	MUSE286C
<b>CONTROL:</b>	Brain
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

PLK5 (polo-like kinase 5) is a protein-coding gene, and is affiliated with the lncRNA class. Diseases associated with PLK5 include glioblastoma, and neuronitis. Inactive serine/threonine-protein kinase that plays a role in cell cycle progression and neuronal differentiation

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not done	
IHC-P	1:75	CC1 s/c IgM+OR
Elisa	1:1000	
IF	Not done	
WB	1:2	
IP	Not done	

## Mouse Monoclonal Antibody



## PRDM1/Blimp-1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	ROS195G, ROS227E and ROS317A
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

B lymphocyte-induced maturation protein-1 (Blimp-1) is a 98-kDa protein containing five Kruppel-type zinc fingers that confer sequence specific DNA binding. Based on studies in B cell lines, Blimp-1 has been postulated to be a master regulator of terminal B cell differentiation. In the BCL-1 lymphoma model of differentiation from a mature B cell to a plasma cell, ectopic expression of Blimp-1 is sufficient to cause terminal differentiation evidenced by loss of surface Ig, IgM secretion, expression of syndecan-1 on the cell surface, and cessation of cell division.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	1:10 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:2	Citrate, EDTA
<b>WB</b>	1:2	
<b>IP</b>	1:2	

**Commercialized by:** Biolegend and Active Motif.

### REFERENCES

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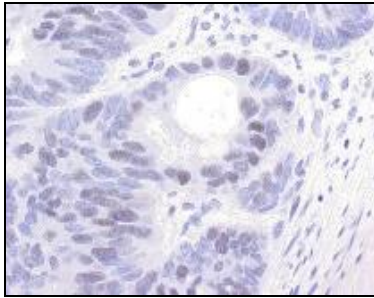
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## Mouse Monoclonal Antibody



## PSF1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	192B
<b>CONTROL:</b>	Hek 293T
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

In eukaryotes, the GINS complex is essential for DNA replication and has been implicated as having a role at the replication fork. This complex consists of four paralogous GINS subunits, Psf1, Psf2, Psf3 and Sld5. Although all of the components are well conserved in higher eukaryotes, the biological function in vivo is largely unknown.

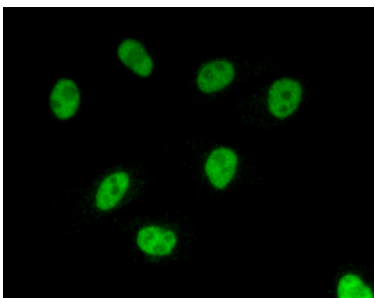
### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	1:10	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	1:10	
<b>WB</b>	1:10	
<b>IP</b>	1:10	

### REFERENCES

Aparicio T, Guillou E, Coloma J, Montoya G and Méndez J. The GINS complex interacts with Cdc45 and MCM proteins and is essential for S phase progression in human cells. *Nucleic Acids Res.* 2009 Apr;37(7):2087-95.

## Mouse Monoclonal Antibody



## PSF2

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	78C
<b>CONTROL:</b>	Hek 293T
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

In eukaryotes, the GINS complex is essential for DNA replication and has been implicated as having a role at the replication fork. This complex consists of four paralogous GINS subunits, Psf1, Psf2, Psf3 and Sld5.

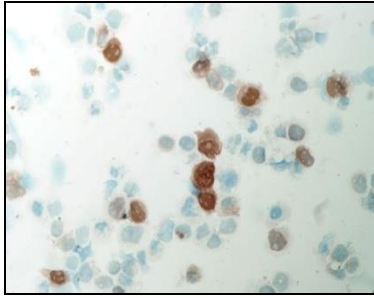
### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	1:10	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	1:10	
<b>WB</b>	1:10	
<b>IP</b>	1:10	

### REFERENCES

Aparicio T, Guillou E, Coloma J, Montoya G and Méndez J. The GINS complex interacts with Cdc45 and MCM proteins and is essential for S phase progression in human cells. *Nucleic Acids Res.* 2009 Apr;37(7):2087-95.

## Mouse Monoclonal Antibody



## PSF3

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	40E
<b>CONTROL:</b>	Hek 293T
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

In eukaryotes, the GINS complex is essential for DNA replication and has been implicated as having a role at the replication fork. This complex consists of four paralogous GINS subunits, Psf1, Psf2, Psf3 and Sld5. Although all of the components are well conserved in higher eukaryotes, the biological function in vivo is largely unknown.

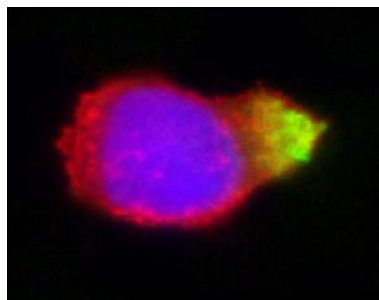
### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	1:10	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	1:10	
<b>WB</b>	1:10	
<b>IP</b>	1:10	

### REFERENCES

Aparicio T, Guillou E, Coloma J, Montoya G and Méndez J. The GINS complex interacts with Cdc45 and MCM proteins and is essential for S phase progression in human cells. *Nucleic Acids Res.* 2009 Apr;37(7):2087-95.

## Mouse Monoclonal Antibody



## PSGL1

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	FLEG
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Membrane
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

P-selectin glycoprotein ligand-1 (PSGL-1, CD162) is a dimeric mucin-like 120-kDa glycoprotein on leukocyte surfaces that binds to P- and L-selectin and promotes cell adhesion in the inflammatory response. PSGL-1 mediates leukocyte-endothelial and leukocyte-platelet adhesion by binding to P-selectin expressed on activated endothelium and platelets and PSGL-1 mediates leukocyte-leukocyte adhesion by binding to L-selectin expressed on apposing leukocytes. PSGL-1 is unique in that it is the only selectin glycoprotein ligand that has been directly demonstrated to mediate cell-cell adhesion in vitro and in vivo.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:400	
<b>IHC-P</b>	1:500 supernatant	ER1 30min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	1:400	Citrate
<b>WB</b>	1:200	
<b>IP</b>	1:200	

**Commercialized by:** eBioscience.

### REFERENCES

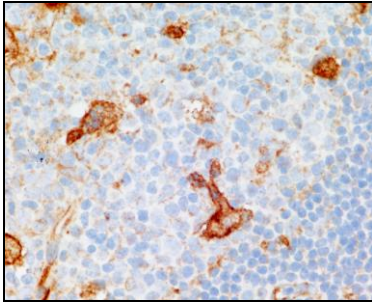
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## Mouse Monoclonal Antibody

### RTN4 (RETICULON-4)



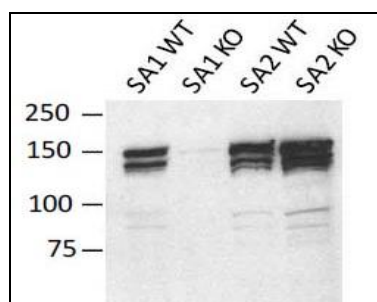
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	LIG198B
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Endoplasmic reticulum membrane
<b>ISOTYPE:</b>	IgG3
<b>REACTS WITH:</b>	Human

Developmental neurite growth regulatory factor with a role as a negative regulator of axon-axon adhesion and growth, and as a facilitator of neurite branching. Regulates neurite fasciculation, branching and extension in the developing nervous system. Involved in down-regulation of growth, stabilization of wiring and restriction of plasticity in the adult CNS. Regulates the radial migration of cortical neurons via an RTN4R-LINGO1 containing receptor complex. Isoform 2 reduces the anti-apoptotic activity of Bcl-xl and Bcl-2. This is likely consecutive to their change in subcellular location, from the mitochondria to the endoplasmic reticulum, after binding and sequestration. Isoform 2 and isoform 3 inhibit BACE1 activity and amyloid precursor protein processing.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:50 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Not done	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## Cohesin subunit SA-1(STAG1)

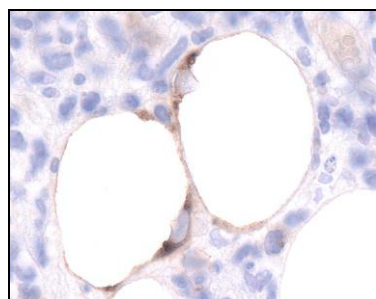
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	SUS163B
<b>CONTROL:</b>	Human tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human and mouse

The protein encoded by this gene is expressed in the nucleus and is a subunit of the cohesin complex which regulates the cohesion of sister chromatids during cell division.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Neat supernatant	20min ER2 (BondMax Leica)
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Neat supernatant	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## Saa3 (Mouse specific)

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	JOR110A
<b>CONTROL:</b>	Supernatant of stimulated RAW12 macrophages cell line
<b>LOCALIZATION:</b>	Cytoplasm and extracellular
<b>ISOTYPE:</b>	IgG2b
<b>REACTS WITH:</b>	Mouse

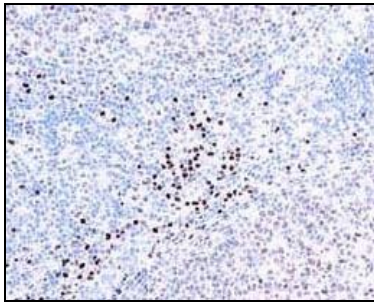
Serum amyloid A (SAA) proteins are proposed mediators of inflammation and metabolism, with increased serum levels being associated with obesity, chronic hyperglycemia, insulin resistance and cardiovascular disease. Mouse SAA3 (mSAA3) protein is known to be up-regulated extrahepatically in inflammatory responses, and acts as an endogenous ligand for the toll-like receptor 4/MD-2 complex. SAA3 also displays monocyte chemotactic activity and may play a role in metabolic inflammation.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Neat supernatant	CC1 ST 60min RbcR+Biot+OR
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	Citrate
<b>WB</b>	1:10 supernatant	
<b>IP</b>	Not done	

**Commercialized by:** BD Bioscience and Abcam

## Mouse Monoclonal Antibody



## SPIB

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	235D
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

*Spi-B* is a member of the Ets family of transcription factors that has high homology with the transcription factor Pu.1. The human *Spi-B* protein has 67% amino acid sequence identity with human Pu.1 and binds specifically to the Pu.1 binding consensus sequence 5' GAGGAA 3'. *Spi-B* can also interact with the co-activator IRF-4 (Pip) which binds a sequence element in the Ig $\lambda$  enhancer when complexed with Pu.1.

### APPLICATIONS

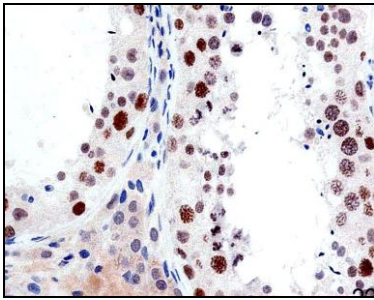
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:3 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** Biolegend and BD Bioscience

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## Mouse Monoclonal Antibody



## SUZ12

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	SUZ220A and SUZ124C
<b>CONTROL:</b>	Testicle
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human and mouse

The Polycomb group (PcG) gene family mediates chromatin modifications that contribute to developmentally regulate transcriptional silencing. Trimethylation of histone H3 on lysine 27, mediated by a PcG protein complex consisting of Eed, Ezh2, and Suz12, is integral in differentiation, stem cell self-renewal, and tumorigenesis.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:15 supernatant 1:100 purified	ER2 20 min Novolink ER1 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:15	
<b>IP</b>	1: 2	

**Commercialized by:** Abcam

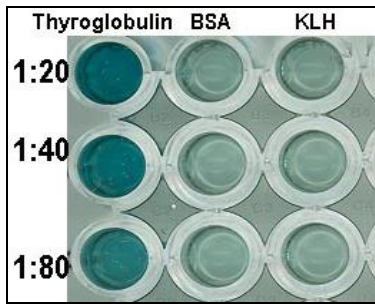
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## Mouse Monoclonal Antibody



## Thyroglobulin

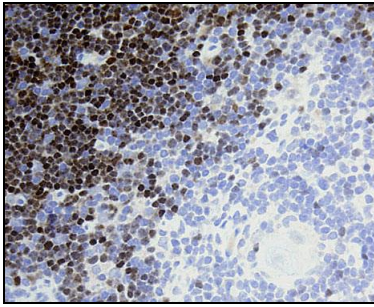
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	TC266A
<b>CONTROL:</b>	Thyroglobulin protein
<b>LOCALIZATION:</b>	N/A
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Bovine

Often used as a carrier protein for the production of antibodies. Its advantage is the large number of tyrosine residues that can be used for conjugation using the diazo reaction.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	Not done	
<b>IP</b>	Not done	

## Mouse Monoclonal Antibody



## TdT

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	41A
<b>CONTROL:</b>	Thymus
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

This antibody recognizes human terminal deoxynucleotidyl transferase (TdT), a nuclear enzyme involved in the recombination of Immunoglobulin and T cell receptor genes. TdT is expressed in early lymphoid cells and by tumour cells in certain classes of acute lymphoid leukaemia.

### APPLICATIONS

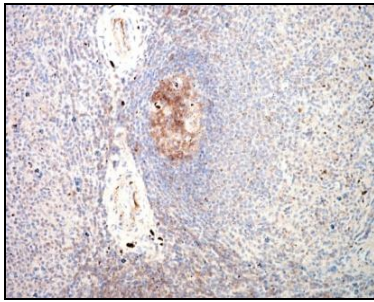
	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1: 2	
<b>IHC-P</b>	1:10 supernatant	ER2 20 min Novolink
	1: 100 purified	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:10	
<b>IP</b>	Not done	

**Commercialized by:** Abcam and Biolegend

### REFERENCES

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## Mouse Monoclonal Antibody



## Timp2/Timp3

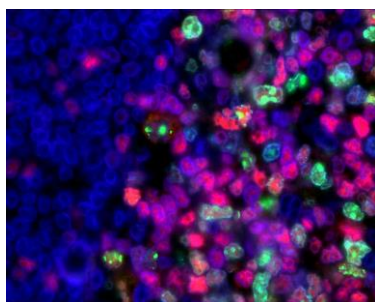
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	PICO680
<b>CONTROL:</b>	spleen
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human and mouse

This gene is a member of the TIMP gene family. The proteins encoded by this gene family are natural inhibitors of the matrix metalloproteinases, a group of peptidases involved in degradation of the extracellular matrix. In addition to an inhibitory role against metalloproteinases, the encoded protein has a unique role among TIMP family members in its ability to directly suppress the proliferation of endothelial cells..

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1: 2	
<b>IHC-P</b>	1: 100 purified	ER2 20 min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:10	
<b>IP</b>	Not done	

## Rat Monoclonal Antibody



## TOX

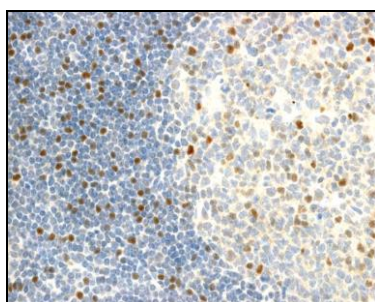
<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	NAN448B
<b>CONTROL:</b>	Human tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Thymocyte selection-associated HMG box factor (TOX) is a DNA-binding factor able to regulate transcription by modifying local chromatin structure and modulating the formation of multi-protein complexes. TOX has multiple roles in the development of the adaptive immune system including development of CD4 T cells, NK cells and lymph node organogenesis.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	Not Done	
IHC-P	1:60 Supernatant	
Elisa	1:1000	
IF	1:60	
WB	Neat Supernatant	
IP	Not done	

## Rat Monoclonal Antibody



## TOX2

<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	JAM262A
<b>CONTROL:</b>	Human tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgM
<b>REACTS WITH:</b>	Human

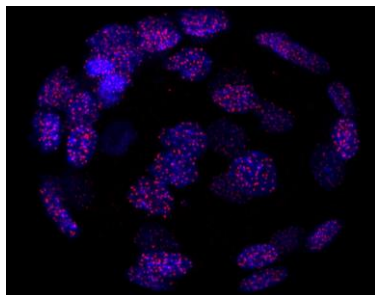
Thymocyte selection-associated high mobility group box protein family member 2 (TOX2) is a transcription factor belonging to the TOX family that shares a highly conserved high mobility group DNA binding domain with the other TOX members. TOX2 is preferentially expressed in mature human NK cells.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
IHC-F	1:5 supernatant	
IHC-P	1:5 supernatant	
Elisa	1:100 supernatant	
IF	Not done	
WB	Not done	
IP	Not done	

## Rat Monoclonal Antibody

### TRF-1(Mouse specific)



<b>TYPE:</b>	Rat monoclonal
<b>CLONE:</b>	572C
<b>CONTROL:</b>	Mefs
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE</b>	IgG2a
<b>REACTS WITH:</b>	Mouse

TERF 1 gene encodes a telomere specific protein which is a component of the telomere nucleoprotein complex. This protein is present at telomeres throughout the cell cycle and functions as an inhibitor of telomerase, acting in cis to limit the elongation of individual chromosome ends. It is known to protect telomeres in mammals from DNA mechanisms that are used for repair purposes and at the same time regulate the activity carried out by telomerase. The telomeric repeat binding factor 1 protein is present at telomeres, where the cells aging aspect is monitored, throughout the typical cell cycle process. The progressive loss of the telomeric ends of chromosomes is an important mechanism in the timing of human cellular aging. Telomeric Repeat Factor 1 (TRF1) is a protein that binds at telomere ends.

#### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	1:100	
<b>IHC-P</b>	Not done	
<b>Elisa</b>	1:1000	
<b>IF</b>	1:200 purified antibody	
<b>WB</b>	1: 500 purified antibody	
<b>IP</b>	Not done	

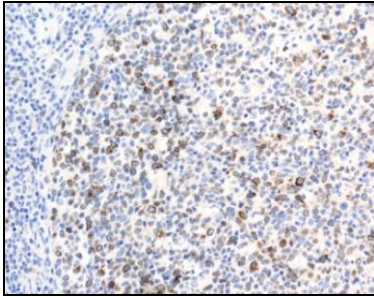
**Commercialized by:** Abcam

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## Mouse Monoclonal Antibody



## VPRES3

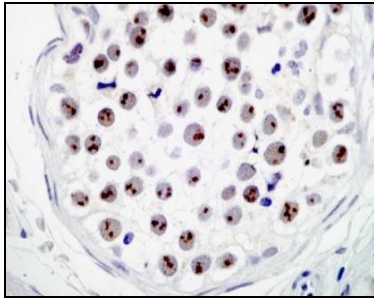
<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	142B
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear and cytoplasm
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

The VPRES3 gene product is the human homologue of the mouse VpreB3 (8HS20) protein, and is specifically expressed in cell lines representative of all stages of B-cell differentiation. It is also related to VPRES1 and other members of the immunoglobulin supergene family. The VPRES3 protein associates with membrane mu heavy chains early in the course of pre-B cell receptor biosynthesis. The precise function of VPRES3 is not known, but it may contribute to mu chain transport in pre-B cells.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	Not working	
<b>IHC-P</b>	1:100 purified	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not Done	

## Mouse Monoclonal Antibody



## WRN (RecQ protein like 2)

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	195C
<b>CONTROL:</b>	Testicle
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG1
<b>REACTS WITH:</b>	Human

Werner syndrome (WS) is caused by a mutation in a gene coding for a member of the RecQ helicase family. The WRN helicase acts as a 'caretaker of the genome' functioning in both DNA repair and transcription, indicating that breakdown of these processes is important in promoting aging.

### APPLICATIONS

	<b>DILUTION</b>	<b>ANTIGEN RETRIEVAL</b>
<b>IHC-F</b>	1:2	
<b>IHC-P</b>	1:5	Citrate + PK
<b>Elisa</b>	1:1000	
<b>IF</b>	Not done	
<b>WB</b>	1:2	
<b>IP</b>	Not done	

**Commercialized by:** Sigma and Active Motif.

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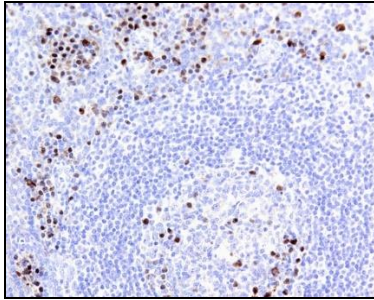
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## Mouse Monoclonal Antibody



## XBP-1s

<b>TYPE:</b>	Mouse monoclonal
<b>CLONE:</b>	143F
<b>CONTROL:</b>	Tonsil
<b>LOCALIZATION:</b>	Nuclear
<b>ISOTYPE:</b>	IgG2a
<b>REACTS WITH:</b>	Human

Xbox binding protein-1 (XBP-1) is a transcription factor essential for plasma cell differentiation. XBP-1 is subject to alternative RNA processing, generating two mRNA transcripts encoding the same N-terminal DNA binding domain, but different C-terminal transactivation domains. The shorter spliced transcript, designated XBP-1s, possesses enhanced transactivation potential and stability relative to the product of the unspliced transcript, designated XBP-1u. Recent studies have uncovered several functions for XBP-1 and have implicated XBP-1 overexpression in human carcinogenesis and tumour growth under hypoxic conditions. Specifically, elevated XBP-1 mRNA levels have been detected in hepatocellular carcinomas and in primary ERa-positive breast tumors.

### APPLICATIONS

	DILUTION	ANTIGEN RETRIEVAL
<b>IHC-F</b>	Not done	
<b>IHC-P</b>	1:100 supernatant	ER2 20min Novolink
<b>Elisa</b>	1:1000	
<b>IF</b>	Not working	
<b>WB</b>	1:10	
<b>IP</b>	Not done	

**Commercialized by:** Biolegend and Millipore

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