

## PRIMARY AND SECONDARY ANTIBODIES

### Antibodies for Cell Biology

ICN offers numerous antibodies for identifying proteins in Cell Biology techniques such as immunohistological localization in tissue sections or cultured cells and Western Blot assays. All antibodies are quality assured to meet specificity and immunostaining characteristics. Additionally, typical working dilutions and specificity information is provided. For more information, please contact ICN Technical Service at [biotech@icnbiomed.com](mailto:biotech@icnbiomed.com).

### Antibodies to Cytoskeletal Proteins

Numerous investigations have revealed that most, if not all, eukaryotic cells and tissues contain several kinds of cytoplasmic fiber. Through the use of Electron Microscopy (EM), three major classes have been identified: microtubules (25 nm diameter, hollow core), microfilaments (6 nm diameter) appearing near the plasma membrane reminiscent of thin filaments found in skeletal muscle, and intermediate filaments (10 nm diameter).

The densely interwoven networks of these filaments are highly resistant to mild detergent treatment normally employed to extract membrane and cytoplasm components. Though these filaments are generally referred to as "cytoskeletal" proteins, their functions involve force generation, movement, cell division and nutrient uptake from the exterior of the cell.

### Microfilament and Related Antibodies

#### ACTIN

##### MONOCLONAL ANTIBODY

##### Anti-Human

Clone: C4

Isotype: mouse IgG<sub>1</sub>

Conc/Titer: 1:400 by PAP

Liquid

**Applications:** Immunoblotting; Indirect Immunofluorescence.

This antibody recognizes an epitope that has been conserved in all actins ranging from human skeletal muscle to plants. Consequently, this antibody provides a means to identify any actin on Western blots and localize these diverse actins in cells using indirect immunofluorescence or other immunohistochemical methods.

**Ref.:** 1. Lessard, J.L., *Cell Motility and the Cytoskeleton*, **10**, pp. 349 (1988).  
2. Otey, C.A., Kalnoski, M.H. and Bulinski, J.C., *J. Cell Biol.*, **34**, pp. 113 (1987).

691001

0.1 ml

691002

0.2 ml

#### ACTIN

##### MONOCLONAL ANTIBODY

##### Anti-Chicken

Clone: 647

Isotype: mouse IgM

Conc/Titer: 1:5-1:20

**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions and acetone-fixed frozen tissue sections. Supplied as clarified ascites diluted with Tris buffer with 1% BSA and 0.09% sodium azide.

10601

0-5°C

1 ml

#### ACTIN

691331

-20°C

##### MONOCLONAL ANTIBODY

##### Anti-Muscle Actin

Clone: B4

Isotype: mouse IgG<sub>1</sub> ascites

Conc/Titer: 1:200-1:500 by PAP

Liquid

**Applications:** Immunoblotting; Formalin-fixed, paraformaldehyde-fixed or frozen sections; Indirect Immunofluorescence.

This antibody is muscle actin specific and shows no binding to either of the two known cytoplasmic actins. While it shows a strong preferential reaction with the smooth muscle  $\gamma$ -enteric isoform of actin, it may also be used to detect ANY other muscle actin including  $\alpha$ -skeletal,  $\alpha$ -cardiac, and  $\alpha$ -vascular actins found in vertebrates.

**Ref.:**

1. Lin, Z.X., et al., *J. Cell Biol.*, **105**, pp. 1365 (1987).
2. Wang, S., et al., *J. Cell Biol.*, **107**, pp. 1075 (1988).

0.1 ml

#### $\alpha$ -ACTIN

637931

-20°C

##### MONOCLONAL ANTIBODY

##### Anti- $\alpha$ -Smooth Muscle Actin

Clone: 1A4

Isotype: mouse IgG<sub>2a</sub> ascites

Conc/Titer: 1:400

**Applications:** Indirect Immunofluorescence.

The original immunogen was the NH<sub>2</sub> terminal synthetic decapeptide of  $\alpha$  smooth muscle actin coupled to KLH. It is specific for the single isoform  $\alpha$  smooth muscle actin. In the original publication describing this antibody it was named anti-alpha-sm-1.

0.2 ml

#### ACTIN

692311

-20°C

##### MONOCLONAL ANTIBODY

##### Anti-Rabbit

Clone: A1

Isotype: mouse IgM ascites

Conc/Titer: 1:5-1:25

**Applications:** Frozen sections; Also suitable for immunoblotting.

The original immunogen was rabbit  $\alpha$ -actin. It stains actin in eukaryotic cells including  $\beta$ ,  $\gamma$ ,  $\delta$ . It does not cross-react with other cytoskeletal proteins.

1 ml

#### ACTIN

691391

-20°C

##### MONOCLONAL ANTIBODY

##### Anti-Muscle Actin

Clone: HUC1-1

Conc/Titer: 1:500 by PAP

Liquid

**Applications:** Immunoblotting; Indirect Immunofluorescence.

This antibody recognizes an epitope shared by all four muscle actins but not found in the two cytoplasmic actins. It is extremely useful for detecting any muscle actin, and has been used to distinguish between benign and malignant sclerosing breast lesions by staining the muscle actin found in myoepithelial cells. It also serves to identify tumors of muscle origin and to define muscle cell differentiation.

0.1 ml

CATALOG  
NUMBER

688011 **ACTIN** 1 ml  
-20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** undiluted liquid antiserum  
**Conc/Titer:** 1:40  
**Applications:** Immunohistology

**ACTIN**  
**POLYCLONAL ANTIBODY**  
**Anti-Chicken**  
**Host:** rabbit  
**Conc/Titer:** 1:10  
**Applications:** Indirect Immunofluorescence.  
This antibody is pooled unadsorbed antiserum produced in rabbits by re-peated injections of purified actin from chicken back-muscle. The antigen consists of the soluble G-actin monomer globulin. Purity and homogeneity of the antigen was verified by SDS-PAGE where it appears as a band with an apparent molecular weight of 43,000. It demonstrates cross reactivity and stains specifically stress fibers of cultured fibroblasts from chicken, mouse, rat, and human, as well as, the I-bands of stretched skeletal muscle.

650962 0.5 ml  
650961 1 ml

**α-ACTININ**  
**MONOCLONAL ANTIBODY**  
**Anti-Chicken**  
**Clone:** CB11  
**Isotype:** IgG<sub>1</sub>  
**Conc/Titer:** 0.1 µg/ml  
**Applications:** Immunoblotting; Immunohistochemistry.  
The original immunogen was purified α-actinin from chicken gizzard. This antibody reacts with the 100 kDa α-actinin polypeptide and with mammalian cells.

693261 10 µg  
693262 50 µg

637941 **α-ACTININ** 0.5 ml  
-20°C **MONOCLONAL ANTIBODY**  
**Anti-Bovine**  
**Clone:** BM-75.2  
**Isotype:** mouse IgM from ascites  
**Conc/Titer:** 1:200  
**Applications:** Indirect Immunofluorescence.  
The original immunogen was a cytoskeletal fraction of bovine mammary gland epithelium cultured cells. The antibody stains specifically α-actinin in cell fibroblast cultures of chick, mouse and human.

691021 **α-ACTININ** 0.5 ml  
-20°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** JLN20  
**Isotype:** mouse IgM from ascites  
**Conc/Titer:** 1:10  
**Applications:** Indirect Immunofluorescence; PAP.  
Immunofluorocent labeling of a large variety of cells with anti-α-actinin reveals an extensive association of the proteins with actin containing stress fibers and in particular with their membrane-bound termini.

CATALOG  
NUMBER

**α-ACTININ**  
**POLYCLONAL ANTIBODY**  
**Anti-Chicken**  
**Host:** rabbit  
**Conc/Titer:** 1:500  
**Applications:** Indirect Immunofluorescence.  
This antibody is derived from pooled antiserum produced in rabbits by re-peated injections of purified alpha-actinin from chicken gizzard.

650932 0.5 ml  
650931 1 ml

**NEW DYNAMIN II**  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** affinity purified liquid  
692211 50 µg  
692212 100 µg

**FILAMIN** 1 ml  
657801 **POLYCLONAL ANTIBODY**  
-20°C **Anti-Filamin**  
**Host:** goat  
**Form:** purified antiserum  
**Applications:** Immunohistochemistry

**α-FODRIN, (Non-Erythroid Spectrin)**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** AA6  
**Isotype:** affinity purified mouse IgG<sub>1</sub>  
**Conc/Titer:** 0.1 µg/ml  
**Applications:** Immunohistochemistry, Western Blotting, and additional immunoassays.  
The original immunogen was chicken blood cell membranes which were purified by hypotonic lysis and mechanical enucleation. The AA6 antibody is specific to the 240 Kd alpha-fodrin molecule of all mammalian non-erythroid cells and to chicken alpha-spectrin  
693271 10 µg  
693272 50 µg

637531 **GELSOLIN** 0.5 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Gelsolin**  
**Clone:** GS-2C4  
**Applications:** Immunoblotting

10605 **MYOSIN** 1 ml  
0-5°C **MONOCLONAL ANTIBODY**  
**Anti-Chicken**  
**Clone:** 414  
**Isotype:** mouse IgM  
**Conc/Titer:** 1:5-1:20  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen tissue sections and formalin-fixed, paraffin-embedded tissue sections.  
The original antigen was isolated from chicken muscle. The antiserum cross-reacts to human, mouse and rabbit. It reacts specifically to myosin in immunoblotting, immunodiffusion and ELISA. It is supplied as clarified tissue culture supernatant with 1% BSA and 0.09% sodium azide.

CATALOG NUMBER

**657901 MYOSIN** 1 ml  
**-20°C POLYCLONAL ANTIBODY**  
 (Skeletal Myosin)  
**Anti-Human**  
**Host:** rabbit  
**Form:** pooled antiserum, liquid  
**Conc/Titer:** 1:20  
**Applications:** Indirect Immunofluorescence.  
 Produced by repeated injections of human skeletal muscle myosin (heavy and light chains) purified using a modification of the method described by Margossian and Lowey. The antibody stains specifically the A bands of human skeletal muscle, and no reactivity is observed with smooth muscle.

**657912 MYOSIN** 0.5 ml  
**-20°C POLYCLONAL ANTIBODY**  
 (Smooth and Skeletal Muscle Myosin)  
**Anti-Bovine**  
**Host:** rabbit  
**Form:** liquid (IgG Fr)  
**Conc/Titer:** 1:10  
**Applications:** Indirect Immunofluorescence.  
 Produced by repeated injections of purified myosin from bovine uterus (smooth muscle). The purified material analyzed by SDS-PAGE consists of one band of heavy chains and two bands of light chains.

**PAXILLIN**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 349  
**Isotype:** purified Ig fraction from mouse ascites  
**Conc/Titer:** 1:1,000-1:5,000  
**Applications:** Immunoblotting; Immunoprecipitation  
 Paxillin localizes to the focal adhesions at the ends of actin stress fibers in chicken embryo fibroblasts. It is present in the focal adhesions of the Madin-Darby bovine kidney epithelial cells but is absent from cell-cell adherens junctions of these cells. When purified from chicken gizzard, it migrates as a diffuse band on SDS-PAGE with  $M_r$  of 65-70 kDa and exists in multiple isoforms.  
 The antibody is packaged at a concentration of 1 mg/ml in 50% glycerol, 5mM TRIS, pH 8.2, 25mM NaCl, 1.5mM Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>.

**696002** 50 µg  
**696001** 100 µg

**691351 SPECTRIN** 0.1 ml  
**0-5°C MONOCLONAL ANTIBODY**  
 ( $\alpha$  &  $\beta$  Spectrin)  
**Anti-Human**  
**Clone:** B12G3  
**Isotype:** mouse IgM presented as ascites fluid  
**Applications:** Immunohistology and Immunochemical studies.  
 The original immunogen was purified human beta spectrin. Spectrin is a major cytoskeletal component of the brain and is found in neuronal axons and presynaptic elements. Western blotting shows D4D7 to be beta spectrin positive.

CATALOG NUMBER

**657981 SPECTRIN** 1 ml  
**-20°C POLYCLONAL ANTIBODY**  
 ( $\alpha$  &  $\beta$  Spectrin)  
**Anti-Human**  
**Host:** rabbit  
**Form:** pooled antiserum, liquid  
**Conc/Titer:** 1:400  
**Applications:** Western Blot.  
 The antibody was produced by repeated injections of SDS-PAGE purified human erythrocyte spectrin ( $\alpha$  and  $\beta$  chains). Spectrin is the major cytoskeletal component in erythrocytes, and it is composed of two types of polypeptides denoted alpha and beta with molecular weights of 240,000 and 220,000 daltons, respectively. A large and diverse family of spectrin-like molecules have been found in non-erythroid cells. In most cases the different spectrin-related proteins contain the common alpha chain and a tissue specific beta chain. The spectrin-like molecules in non-erythroid cells are known by different names such as fodrin, CBP I, calspectin and TW 260/240. It should be noted that spectrins bind calmodulin.

**657951 TROPOMYOSIN** 1 ml  
**-20°C POLYCLONAL ANTIBODY**  
**Anti-Chicken**  
**Host:** rabbit  
**Form:** pooled delipidized antiserum  
**Conc/Titer:** 1:100  
**Applications:** Indirect Immunofluorescence.  
 This antibody is produced by repeated injections of purified smooth muscle tropomyosin from chicken gizzard prepared by a modification of the method described by Bailey. The purity of the antigen was determined by SDS-PAGE where it appeared as a doublet with apparent molecular weight of 42,000 and 36,000. Tropomyosin is a rigid, rod-shaped protein closely associated with actin filaments. In non-muscle cells grown in culture tropomyosin is distributed periodically along the length of the stress fibers.

**637961 TROPOMYOSIN** 0.5 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** TM311  
 Applications: Immunohistology

**691241 TROPONIN T** 1 ml  
**0-5°C MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** JLT-12  
**Isotype:** mouse IgG<sub>1</sub> presented as ascites fluid  
**Conc/Titer:** 1:15  
**Applications:** PAP.  
 Troponin is a regulatory protein of molecular weight approximately 89 kDa which is associated with microfilaments. Troponin T is one of the three polypeptide chains (the others are I and C) which make up the whole molecule.

CATALOG  
NUMBER

**VINCULIN**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Isotype:** mouse IgG<sub>1</sub> presented as ascites fluid  
**Conc/Titer:** 1:50  
**Applications:** Indirect Immunofluorescence.  
Vinculin, a 30 kDa polypeptide, is associated with the cytoplasmic aspect of contact areas close to the membrane. It may serve as a link between the ends of the bundles of actin filaments and the plasma membrane and may also be involved in the transmembrane induction of actin-bundle formation.

637802 0.25 ml  
637801 0.5 ml

**VINCULIN**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** FB11  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunohistochemistry, Immunoblotting

693291 10 mg  
0-5°C

### Microtubule and Associated Antibodies

**MICROTUBULE ASSOCIATED PROTEINS** 0.5 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Bovine**  
**Host:** rabbit  
**Form:** pooled delipidized antiserum  
**Conc/Titer:** 1:200  
**Applications:** Western Blot analysis, Immunofluorescence  
This antibody was produced by immunization with purified (as determined by SDS-PAGE) bovine brain MAPs. Three classes of proteins were identified that purify with tubulin through repetitive cycles of microtubule assembly and disassembly *in vitro*. They are MAP1, MAP2, and Tau. It will stain heat-stable MAPs and labels cultured avian and mammalian cells and tissue preparations. It will not stain tubulin.

657832 -20°C

**MICROTUBULE ASSOCIATED PROTEIN 1** 0.1 ml  
**MONOCLONAL ANTIBODY**  
(MAP1)  
**Anti-Rat**  
**Clone:** HM-1  
**Isotype:** mouse IgG<sub>1</sub> ascites fluid  
**Conc/Titer:** 1:500  
**Applications:** Immunoblotting  
This antibody reacts specifically with MAP1 and does not cross-react with other MAP's or tubulin. Furthermore, it demonstrates selective labeling of neurons and stronger staining of axons than dendrites. It performs best on rat and mouse cells.

638002 -20°C

**MICROTUBULE ASSOCIATED PROTEIN 2** 0.1 ml  
**MONOCLONAL ANTIBODY**  
(MAP2)  
**Anti-Rat**  
**Clone:** HM-2  
**Isotype:** mouse IgG<sub>1</sub> ascites fluid  
**Conc/Titer:** 1:500  
**Applications:** Immunoblotting  
This antibody reacts with all MAP2 forms, including MAP2a, MAP2b, and MAP2c. It shows no cross reactivity to other MAP's or tubulin. It demonstrates selective labeling of dendritic trees throughout the brain. It reacts with human, rat, mouse, bovine, chicken, and quail cells and tissues.

638012 -20°C

CATALOG  
NUMBER

**MICROTUBULE ASSOCIATED PROTEIN 5** 0.1 ml  
**MONOCLONAL ANTIBODY**  
(MAP5)  
**Anti-Rat**  
**Clone:** AA6  
**Isotype:** mouse IgG<sub>1</sub> ascites fluid  
**Conc/Titer:** 1:500  
**Applications:** Immunohistochemical studies, Immunoblotting  
This antibody shows no cross reactivity with other MAP's or tubulin. It selectively labels neurons in brain tissue. Furthermore, it more strongly stains axons, dendrites and cell bodies. It reacts with human, rat, mouse, bovine, and chicken cells and tissues.

638022 -20°C

**TAU** 0.1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Bovine**  
**Clone:** TAU-2  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:1,000  
**Applications:** Immunoblotting  
This product reacts exclusively with the chemically heterogenous Tau in both the phosphorylated and non-phosphorylated form. It does not react with MAP's or tubulin, and it localizes Tau along microtubules found in axons, somata, dendrites, astrocytes, as well as, along ribosomes. It will stain Tau in the Alzheimer neurofibrillary tangles on formalin fixed paraffin embedded sections of human brain tissue. It demonstrates reactivity with human, bovine, monkey and chicken cells or tissues.

638032 -20°C

**TAU** 0.5 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Chicken**  
**Host:** rabbit  
**Form:** pooled delipidized antiserum  
**Conc/Titer:** 1:100  
**Applications:** Western blots; dot immunobinding  
This antibody is produced by repeated injections of tau proteins from chick embryo brain. The antiserum is evaluated for specificity and potency by immunoenzymatic labeling procedures. It will not stain MAP1, MAP2, or tubulin.

657842 -20°C

**TUBULIN** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Chicken**  
**Clone:** 655  
**Isotype:** mouse IgM  
**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen tissue sections, and formalin-fixed, paraffin-embedded tissue sections.  
The original antigen was purified from chicken muscle. The antibody reacts to human tubulin. It reacts specifically to tubulin in immunoblotting and ELISA. It is supplied as clarified ascites diluted with Tris buffer with 1% BSA and 0.09% sodium azide.

10610 0-5°C

# Immunobiologicals

CATALOG  
NUMBER

**650952 TUBULIN** 0.5 ml  
-20°C **POLYCLONAL ANTIBODY**  
**Anti-Chicken**  
**Host:** rabbit  
**Form:** pooled unadsorbed antiserum  
**Conc/Titer:** 1:10  
**Applications:** Indirect Immunofluorescence; Immunoblots  
This antibody is produced by repeated injections of purified tubulin ( $\alpha$  &  $\beta$  chains) from chick embryo brain removed on the 13th day of development. Activity of this antiserum is greater than 80% tubulin and can be used to identify microtubule proteins in immunoblots. In immunoblots, MAP2 and Tau protein may appear.

**691251  $\alpha$ -TUBULIN** 1 ml  
0-5°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** DM1A  
**Isotype:** mouse IgG<sub>1</sub> ascites fluid  
**Conc/Titer:** 1:20  
**Applications:** PAP  
**IMMUNOHISTOLOGY GRADE**  
This antibody is specific for  $\alpha$ -tubulin in immunoblots.

**691261  $\beta$ -TUBULIN** 1 ml  
0-5°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** DM1B  
**Isotype:** mouse IgG<sub>1</sub> ascites fluid  
**Conc/Titer:** 1:20  
**Applications:** PAP  
**IMMUNOHISTOLOGY GRADE**  
This antibody is specific for  $\beta$ -tubulin in immunoblots.

**637812  $\beta$ -TUBULIN** 0.25 ml  
0-5°C **ANTIBODY**  
**Anti-Human**  
**Clone:** TUB 2.1  
**Isotype:** mouse IgG<sub>1</sub> presented as ascites fluid  
**Conc/Titer:** 1:200  
**Applications:** Indirect Immunofluorescence  
This antibody demonstrates reactivity with human, bovine, and murine cells and tissues. It specifically stains  $\beta$ -tubulin on immunoblots.

**637831  $\beta$ -TUBULIN** 0.5 ml  
-20°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 351.59  
**Isotype:** mouse IgG  
**Applications:** Immunohistology

**691341  $\beta$ -TUBULIN** 0.1 ml  
0-5°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 3F3G2  
**Isotype:** mouse IgM presented as ascites fluid  
**Conc/Titer:** 1:500  
**Applications:** Indirect Immunofluorescence, Immunohistology, and immunoblotting  
The antibody recognizes  $\beta$ -tubulin.

CATALOG  
NUMBER

**638042 TYROSINE TUBULIN** 0.25 ml  
-20°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** TUB-1A2  
**Isotype:** mouse IgG<sub>3</sub>  
**Conc/Titer:** 1:800  
**Applications:** Indirect Immunofluorescence, Immunoblotting  
This antibody is produced using a peptide containing the carboxy-terminal amino acids of  $\alpha$ -tubulin. It reacts with tubulin's carboxy-terminal tyrosine in immunoblotting assays and may be used for the localization of the epitope in cultured cells or tissue sections of human, other animals, and plants.

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Primary Antibodies



## Intermediate Filament Antibodies

Five different types of Intermediate Filaments are expressed in cells. Generally, a given cell type features only one type of filament as described below.

Cell Type	Protein	Molecular Weight
Epithelial	Keratin (approx. 20 forms)	40-68 kDa
Neuronal	Neurofilaments (3 forms)	68-70 kDa 160 kDa 200 kDa
Glial	GFAP (glial fibrillary acidic protein)	51 kDa
Muscle	Desmin	53 kDa
Mesenchyma	Vimentin	58 kDa

## Antibodies to Intermediate Filaments

Cat. No.	Specificity	Clone/Host	Quantity
637702	Cytokeratin	K8.13	0.25 ml
637701	Cytokeratin		0.50 ml
637752	Cytokeratin (desmosomal)	DK80.2	0.25 ml
10521	Cytokeratin 5,8	RCK 102	1 ml
10522	Cytokeratin 7	RCK 105	1 ml
10526	Cytokeratin 8	M20	1 ml
10502	Cytokeratin 8,18,19	NCL 5D3	1 ml
11414	Cytokeratin 10	DE K10	1 ml
10501	Cytokeratin 10	RKSE 60	1 ml
699701	Cytokeratin 13	KS13.1	50 mg
10523	Cytokeratin 13	1C7	1 ml
10524	Cytokeratin 13	2D7	1 ml
637711	Cytokeratin 13,16	K8.12	0.5 ml
10003	Cytokeratin 14	RCK 107	1 ml
11416	Cytokeratin 18	RCK 106	1 ml
697311	Cytokeratin 18	KS18.174	50 mg
10500	Cytokeratin 18	RGE 53	1 ml
699711	Cytokeratin 19	KS19.1	50 mg
11417	Cytokeratin 19	RCK 108	1 ml
10550	Cytokeratins (pan)	rb	0.25 ml
692321	Desmin	D1	1 ml
691092	Desmin	DE-U-10	0.2 ml
10519	Desmin	D9	1 ml
10570	Desmin	rb	0.25 ml
695421	Desmoplakin I/II	Dp 2.15	50 mg
691821	GFAP	8	1 ml
691102	GFAP	GA 5	1 ml
10505	GFAP	6F2	1 ml
681231	GFAP	rb	0.25 ml
10555	GFAP	rb	0.25 ml
657922	Keratin	gp	0.5 ml
692451	Keratin	rb	0.25 ml
681201	Keratin	rb	0.25 ml
697031	Neurofilament 68	NR4	0.2 ml
697041	Neurofilament 160	NN18	0.2 ml
10512	Neurofilament 160	NF 403	1 ml
691841	Neurofilament 200	402	1 ml
697051	Neurofilament 200	NE14	0.2 ml
10511	Neurofilament 200	NF 402	1 ml
10510	Neurofilaments 68/200	2F11	1 ml
692361	Vimentin	V5	1 ml
10515	Vimentin	V9	1 ml
691272	Vimentin	V9	0.2 ml
693061	Vimentin	LN-6	4 ml
657942	Vimentin	gt	0.5 ml
647401	Vimentin	gt	0.5 ml

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## MONOCLONAL ANTIBODIES TO KERATINS

This collection of antibodies to epithelial keratins are among the most highly characterized monoclonal antibodies reactive to keratins and other epithelial antigens. Some are broadly reactive, recognizing almost all epithelia, thereby, useful for the distinction of (keratin-positive) carcinomas from (keratin-negative) tumors of non-epithelial origin. Others are highly specific, recognizing only the differentiated compartment of a few epithelia. Such antibodies are useful for studying mechanisms or pathways of epithelial differentiation. All antibodies are purified immunoglobulin fractions from ascites.

### Clones AE1 and AE3

These two antibodies were first described by Woodcock-Mitchell.<sup>1</sup> Extensive analyses later showed that the AE1 antibody recognizes most of the acidic (type I) keratins, whereas, AE3 recognizes all known basic (type II) keratins.<sup>2-5</sup> Since each epithelium contains at least one acidic and one basic keratin,<sup>2,5,6</sup> these two antibodies are broadly reactive and stain positively nearly all epithelia and their neoplasms.<sup>2,7</sup> They work well on unfixed frozen sections and on alcohol or formalin-fixed, paraffin sections.<sup>7,8,9</sup> Additionally, the AE1 antibody exhibits the interesting property of producing heterogeneous staining within a given epithelium. The detailed staining pattern varies depending on the differentiated and/or growth state of individual cells.<sup>7-11</sup> Both clones show broad species specificity, cross-reacting with keratins of human, rabbit, mouse, rat, bovine and chick.<sup>2,12,23,13</sup> They have been used for studying the localization of epidermal keratins,<sup>1</sup> tissue distribution of keratins,<sup>2</sup> various diseases of epidermis,<sup>14</sup> oral mucosa,<sup>15</sup> and other epithelia,<sup>16,17</sup> and epithelia development.<sup>18</sup> AE1 and AE3 have also been used extensively for distinguishing carcinomas from normal tissue.<sup>7-10</sup>

### Clone AE2

AE2 recognizes the acidic, 56.5 kDa, and the basic, 65-67 kDa, keratins which have been localized in the suprabasal layers of human epidermis.<sup>1,2</sup> These keratins also appear suprabasally in corneal, conjunctival and esophageal epithelial when the epithelia keratinize during vitamin A deficiency.<sup>12</sup> For these reasons, this keratin "pair" have been designated as markers for skin-type differentiation (keratinization).<sup>1,2,5,6,12</sup> AE2 also cross-reacts with filaggrin, a keratin-associated protein believed to be a key in facilitating keratin-keratin aggregation.<sup>19</sup> Like AE1 and AE3, the AE2 antibody works well in formalin-fixed, paraffin sections. However, it requires protease activation.<sup>8</sup>

### Clone AE5

The AE5 antibody is specific for the basic 64 kDa keratin<sup>20</sup> which, together with the acidic 55 kDa keratin, has been designated as a marker for "corneal-type differentiation."<sup>20,21</sup> Studies using this antibody suggest that corneal epithelial stem cells are located in the limbus, the transitional zone between cornea and conjunctiva. Besides corneal epithelium, AE5 also reacts with lip and snout (cow and rabbit) epithelia.<sup>20</sup> For this antibody, unfixed frozen sections perform better than formalin-fixed sections.

### Clone AE8

This antibody reacts strongly with the acidic 51 kDa keratin which is expressed mainly in the suprabasal cells of esophageal, ventral tongue, buccal mucosal, exocervical, and other internal, non-keratinized stratified squamous epithelia.<sup>22</sup> The 51 kDa keratin and its frequently, co-expressed partner, the basic 59 kDa keratin, may be regarded as markers for "esophageal-type differentiation."<sup>5,21</sup>

## AE Clone MIX

This product is a special mix of the AE1 and AE3 monoclonal antibodies designed for the positive identification of normal and abnormal epithelial cells and tissues. It is specially formulated to be broadly reactive with most acidic (type I) keratins and all known basic (type II) keratins. The AE1/AE3 mix performs well on unfixed frozen sections, alcohol-fixed and formalin-fixed, paraffin sections. It exhibits broad species cross-reactivity: human, rabbit, mouse, rat, bovine and chick. The typical dilution is 1:200 for immunohistochemistry procedures. This mix is also available in the ImmuMark™ Anti-Cytokeratin Universal kit containing a biotinylated link antibody and streptavidin-HRP conjugate.

### References:

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## Epithelial Keratins Monoclonal Antibodies

Cat. No.	Clone	Dilution	Quantity
691401	AE1	1:400	200 µg
691411	AE2	1:40-1:50	200 µg
691421	AE3	1:200	200 µg
691431	AE5	1:50-1:500	200 µg
691441	AE8	1:50-1:500	200 µg
691451	AE1/AE3 Mix	1:100-1:200	200 µg

### CATALOG NUMBER

**691461**  
-20°C  
**EPITHELIAL KERATIN** 1 Kit  
**MONOCLONAL ANTIBODY**  
**IMMUMARK UNIVERSAL KIT**  
**Anti-Human**  
**Clone:** AE1/AE3 mix  
**Isotype:** purified Ig fraction from ascites  
This kit includes 100 µg of the AE1/AE3 monoclonal mix, 17 ml of biotinylated link antibody, and 17 ml of streptavidin-HRP conjugate.

### CATALOG NUMBER

## Cell Adhesion and Associated Antibodies

**636012**  
-20°C  
**A-CELL ADHESION MOLECULE** 0.25 ml  
**MONOCLONAL ANTIBODY**

(A-CAM; N-Cadherin Antibody)

**Anti-Chicken**

**Clone:** ID-7.2.3

**Isotype:** mouse IgG<sub>2a</sub> presented as ascites fluid

**Conc/Titer:** 1:20

**Applications:** Indirect Immunofluorescence; Immunoblotting

This antibody localizes a 135 kDa receptor of intercellular adherens junction in immunofluorescence microscopy, electron microscopy, or immunoblotting procedures. It labels intercellular junctions formed by chicken fibroblastic and epithelial cells in cell culture, and localizes vinculin and actin-rich intercellular contacts.

The original immunogen was an amphipathic protein fraction from chicken cardiac muscle intercalated discs.

**Ref.:** 1. Geiger, B., et al., *J. Cell Bio.*, **101**, 1523 (1985). 2. Volk, T. and Geiger, B., *EMBO J.*, **3**, 2249 (1984).

**696271**  
-20°C  
**I-CELL ADHESION MOLECULE 1** 0.1 mg  
**MONOCLONAL ANTIBODY**

(Anti-I-CAM)

**Anti-Rat**

**Clone:** 1A29

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 1:100-1:200

**Applications:** immunohistochemistry; flow cytometry

This antibody recognizes the rat ICAM-1 (intercellular adhesion molecule-1) molecule (90 kDa) belonging to the superimmunoglobulin family.

**10704**  
0-5°C  
**E-CADHERIN** 1 ml  
**MONOCLONAL ANTIBODY**

(Anti-L-CAM; Anti-Uvomorulin)

**Anti-Human**

**Clone:** 6 F9

**Isotype:** mouse IgG<sub>1</sub>

**Conc/Titer:** 1:5-1:20

**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen and formalin-fixed paraffin-embedded tissue sections.

Supplied as cell supernatant purified by ammonium sulfate precipitation with 1% BSA and 0.09% sodium azide.

This antibody reacts to E-cadherin (epithelial Ca<sup>2+</sup> dependent cell adhesion molecule) in ELISA and show specific reaction to teh 120 kDa and 80 kDa ARC-1 polypeptides in immunoblotting.

**Ref.:** Frixen, U.H., et al., *J. Cell Biolog.*, **113**, 173-185 (1991).

2. Umbas, R., et al., *Cancer Res.*, **52**, 5104-5109 (1992).

CATALOG  
NUMBER

**10028** **E-CADHERIN** 1 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
(Anti-L-CAM; Anti-Uvomorulin)  
**Anti-Human**  
**Clone:** 5 H9  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:5-1:20  
**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen and formalin-fixed paraffin-embedded tissue sections.  
Supplied as cell supernatant purified by ammonium sulfate precipitation with 1% BSA and 0.09% sodium azide.  
This antibody reacts to E-cadherin (epithelial Ca<sup>2+</sup> dependent cell adhesion molecule) in ELISA and show specific reaction to teh 120 kDa and 80 kDa ARC-1 polypeptides in immunoblotting.

**637601** **L-CELL ADHESION MOLECULE** 0.2 ml  
-20°C  
**MONOCLONAL ANTIBODY**  
(Anti-L-CAM; E-Cadherin; Cell CAM 80/120; ARC-1; Uvomorulin Antibody)  
**Anti-Mouse**  
**Clone:** DECMA-1  
**Isotype:** rat IgG<sub>1</sub> presented as ascites fluid containing 0.1% sodium azide  
**Applications:** Immunoblotting; Immunoprecipitation; Indirect Immunofluorescence  
The original immunogen was derived from the mouse cell line PCC4 Aza RI. This antibody is reactive with mouse and dog tissue. It may be used for labeling confluent cell layers grown in culture, as well as, the localization of uvomorulin. Also, it can be used to study embryonal development and cell-cell interaction in cell cultures.

**692371** **L-CELL ADHESION MOLECULE** 1 ml  
-20°C  
**MONOCLONAL ANTIBODY**  
(Anti-L-CAM; Anti-Uvomorulin)  
**Anti-Human**  
**Clone:** 6 F9  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:5-1:20  
**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen and formalin-fixed paraffin-embedded tissue sections.  
Supplied as cell supernatant purified by ammonium sulfate precipitation with 1% BSA and 0.09% sodium azide.  
This antibody reacts to E-cadherin (epithelial Ca<sup>2+</sup> dependent cell adhesion molecule) in ELISA and show specific reaction to teh 120 kDa and 80 kDa ARC-1 polypeptides in immunoblotting.  
**Ref.:** Frixen, U.H., et al., J. Cell Biolog, **113**, 173-185 (1991).  
2. Umbas, R., et al., Cancer Res., **52**, 5104-5109 (1992).

CATALOG  
NUMBER

**11421** **N-CELL ADHESION MOLECULE** 1 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** RNL 1  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:5-1:20  
**Applications:** Immunoblotting; Immunostaining of cell suspensions and acetone-fixed frozen tissue sections.  
This antibody reacts to the N-CAM (neural cell adhesion molecule) in immunoblotting and, in immunohistochemistry, with normal neural tissues and endocrine glands including pancreatic islet cells, pituitary gland, and adrenal medulla. It also stains the Leydig cells of the testis, cells in the thyroid and smooth muscle cells of the small intestine, colon and bladder. It is supplied as clarified tissue cell supernatant with 1% BSA and 0.09% sodium azide.  
**Ref.:** 1. Broers, J., et al., Cancer, **67**, 619-633 (1991).  
2. Boerman, O.C., et al., Int. J. Cancer, **48**, 457-462 (1991).

**695401** **CLATHRIN, Heavy Chain** 50 µg  
-20°C  
**MONOCLONAL ANTIBODY**  
**Anti-Clathrin H**  
**Clone:** CHC 5.9  
**Isotype:** mouse IgM  
**Conc/Titer:** 1:1, 10 µg/ml  
**Applications:** Indirect Immunofluorescence  
This antibody is reactive against clathrin H chain (180 kDa). It is a sensitive probe for identification of coated pits and vesicles as well as low concentrations of soluble clathrin in cell homogenates from diverse tissues of bovine, rat, human, and amphibian origin.  
See the Immunobiologicals section for further details.

**657811** **CLATHRIN** 0.5 ml  
-20°C  
**POLYCLONAL ANTIBODY**  
**Anti-Bovine**  
**Host:** goat  
**Form:** delipidized antiserum  
**Conc/Titer:** 1:40  
**Applications:** Indirect Immunofluorescence  
The antiserum was produced in goats by injection of purified clathrin from bovine brain coated vesicles. Clathrin is the main constituent of the polygonal network that forms the coat of coated vesicles and coated pits. It is widely assumed that coated vesicles mediate the selective transfer of molecules and membrane components between specific membranous organelles within cells. Clathrin forms a three-legged structure termed a triskelion which contains three clathrin heavy chains (MW 180 kDa) and three noncovalently bound light chains (MW 30-40 kDa).



CATALOG NUMBER

## Antibodies to Extracellular Matrix Proteins

There is considerable research interest regarding the role of Extracellular Matrix proteins in cell structure, attachment and growth. The ECM consists of basement membranes and interstitial stroma. Basement membranes, which contain type IV collagen, laminin and proteoglycans, contribute to overall tissue structure and cell differentiation. Certain carcinomas and pathological conditions may alter the ECM and normal basement membrane structure. Immunohistochemical methods utilizing antibodies to ECM proteins have proven valuable in researching and diagnosing these changes.

ICN offers numerous monoclonal and polyclonal antibodies directed against ECM proteins for use in indirect immunofluorescence, immunoperoxidase and competitive binding studies. For additional information, please contact ICN Technical Service.

**636531** **CHONDROITIN SULFATE D** 50 µl  
**-20°C**  
**MONOCLONAL ANTIBODY**  
**Anti-Chicken**  
**Clone:** MO-225  
**Isotype:** mouse IgM kappa  
**Conc/Titer:** 1:700-1:1000  
**Applications:** Immunohistology.  
 This antibody was produced against chick embryo limb bud proteoglycan (PG-M) due to its ability to recognize determinants on intact chondroitin sulfate chains. It reacts with chick embryo cartilage proteoglycans (PG-H, PG-Lb, and PG-Lt) and bovine nasal cartilage proteoglycan but not with Swarm rat chondrosarcoma proteoglycan. Activity is not affected by keratanase digestion but is abolished after chondroitinase digestion.

**COLLAGEN, Type I**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** I-8H5  
**Isotype:** purified mouse IgG<sub>2a</sub>  
**Conc/Titer:** 500 µg/ml  
**Applications:** Immunoassay  
 This antibody reacts specifically with human type I collagen. It does cross-reacts with rabbit type I collagen.

**631701** 100 µg  
**631702** 250 µg  
**631703** 500 µg

**COLLAGEN, Type II**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** II-4C11  
**Isotype:** purified mouse IgG<sub>1</sub>  
**Conc/Titer:** 500 µg/ml  
**Applications:** Immunoassay  
 This antibody reacts specifically with human costal cartilage type II collagen. It does cross-reacts with rabbit and rat type II collagen.

**631711** 100 µg  
**631712** 250 µg  
**631713** 500 µg

CATALOG NUMBER

**COLLAGEN, Type III**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** III-53  
**Isotype:** purified mouse IgG<sub>1</sub>  
**Conc/Titer:** 500 µg/ml  
**Applications:** Immunoassay  
 This antibody reacts specifically with human placental type III collagen. It does cross-reacts with rabbit type III collagen.

**631721** 100 µg  
**631722** 250 µg  
**631723** 500 µg

**10710** **COLLAGEN TYPE IV** 1 ml  
**0-5°C**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 1042  
**Isotype:** mouse IgG<sub>2b</sub>  
**Conc/Titer:** 1:50-1:20  
**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen sections, and formalin-fixed paraffin-embedded tissue sections.  
 The original antigen was isolated from extracellular proteins of human placenta. The antibody is specific to collagen type IV in ELISA and to basement membrane in immunohistochemistry. It is supplied as clarified ascites diluted with Tris buffer with 1% BSA and 0.09% sodium azide.  
**Ref.:** Havenith, M.G., et al., **87**, 123-128 (1987).

**10760** **COLLAGEN TYPE IV** 0.25 ml  
**0-5°C**  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** liquid  
**Conc/Titer:** 1:50-1:100  
**Applications:** ELISA; Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen sections, and formalin-fixed paraffin-embedded tissue sections.  
 The original antigen was isolated from extracellular proteins of human placenta. It reacts specifically to collagen of basement membranes in immunohistochemistry. It demonstrates some reaction in immunoblotting to collagen type V at high antibody and/or antigen concentrations. It shows cross-reactivity with the basement membrane of most species. It is supplied as delipidated antiserum with 1% BSA and 0.09% sodium azide.  
**Ref.:** Visser, R., et al., *Histopathology*, **10** 171-180 (1986).

**685671** **COLLAGEN TYPE IV** 0.5 ml  
**0-5°C**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 24.12.8 (PHM-12)  
**Isotype:** IgG<sub>1</sub>  
**Conc/Titer:** 0.8 ng/ml  
**Applications:** Indirect Immunoperoxidase staining  
 This monoclonal antibody is reactive against glomerular and tubular basement membranes in kidney as well as basal lamina of capillaries. It may be used to label mesangial cells and matrix within the glomerulus as well as basement membrane structures in all organs.

CATALOG  
NUMBER

691711 **COLLAGEN TYPE IV** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 1042  
**Isotype:** IgG<sub>2b</sub> presented as mouse ascites fluid  
**Conc/Titer:** 1:20  
 Applications: Immunohistology; Immunoblotting; ELISA  
 This antibody reacts exclusively with human collagen type IV in acetone-fixed frozen sections and in proteolytically treated formalin-fixed sections.

691081 **COLLAGEN TYPE IV** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** PHM 12  
**Isotype:** IgG<sub>1</sub> presented as purified antibody in phosphate buffered saline with 0.2% BSA and 0.1% sodium azide  
**Conc/Titer:** 1:40-1:150  
 Applications: Immunohistochemistry  
 This antibody is specific for human collagen type IV in frozen tissue samples and in proteolytically treated formalin-fixed tissues.

681241 **COLLAGEN TYPE IV** 0.25 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** liquid antiserum  
**Conc/Titer:** 1:50-1:100  
 Applications: ELISA; Tissue sections  
 The antiserum was produced by repeated injections of collagen type IV from human placenta. It can be used on both acetone-fixed frozen sections and on proteolytically treated formalin-fixed sections. It is exclusively reactive with basement membranes in immunohistochemistry. It demonstrates slight cross-reactivity with collagen V in ELISA, and it reacts with various reduced and non-reduced human collagen type IV bands in immunoblotting. The antibody does react with basement membranes of all mammals.

**COLLAGEN, Type IV**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** IV-4H12  
**Isotype:** purified mouse IgG<sub>1</sub>  
**Conc/Titer:** 500 µg/ml  
 Applications: Immunoassay  
 This antibody reacts specifically with human placental type IV collagen.

631731 100 µg  
 631732 250 µg  
 631733 500 µg

**COLLAGEN, Type V**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** V-3C9  
**Isotype:** purified mouse IgM  
**Conc/Titer:** 500 µg/ml  
 Applications: Immunoassay  
 This antibody reacts specifically with human placental type V collagen. It cross-reacts with rabbit and rat type V collagen.

631741 100 µg  
 631742 250 µg  
 631743 500 µg

CATALOG  
NUMBER

**COLLAGEN, Type VI**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** VI-26  
**Isotype:** purified mouse IgG<sub>1</sub>  
**Conc/Titer:** 500 µg/ml  
 Applications: Immunoassay  
 This antibody reacts human placenta type VI collagen. It is cross-reactive with rabbit and rat type VI collagens.

631751 100 µg  
 631752 250 µg  
 631753 500 µg

**COLLAGEN, Type IX**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 23-5D1  
**Isotype:** purified mouse IgG<sub>2a</sub>  
**Conc/Titer:** 500 µg/ml  
 Applications: Immunoassay  
 This antibody reacts human type IX collagen. It is cross-reactive with bovine, murine and lapone type IX collagens.

631761 100 µg  
 631762 250 µg  
 631763 500 µg

**FIBRONECTIN** 0.5 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** FN-15  
**Isotype:** mouse IgG<sub>1</sub> presented as specially processed ascites fluid  
**Conc/Titer:** 1:200-1:2,500  
 Applications: Indirect Immunofluorescence; ELISA; Immunoblotting  
 The original immunogen was derived from a fusion between a mouse myeloma cell line and splenocytes from BALB/c mice immunized with fibronectin from human plasma. The antibody may be used to specifically localized FN in human cell cultures and in tissues sections. Also, it may be used to specifically modulate the functional activity of FN. It specifically stains fibronectin in the pericellular extracellular matrix using indirect fluorescent labeling. This product reacts best in cultured human fibroblasts, but good results occur with chicken and murine cells.

**FIBRONECTIN, Cellular**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** DH 1  
**Isotype:** mouse IgG<sub>1</sub> presented affinity purified  
**Conc/Titer:** 1 µg/10 µl  
 Applications: Immunohistochemistry; Immunoblotting  
 The original immunogen was purified fibronectin from A8387 fibrosarcoma cells. This antibody recognizes only cellular fibronectin. Also, it recognizes cFn in all studied malignant tumors<sup>1</sup>, while normal and benign tissues studied were negative.<sup>2</sup> Some embryonic tissues show positive staining for the ED sequence in colocalization with laminin.<sup>3</sup>  
**Ref.:** 1. Vartio, T., et al., *J. Biol. Chem.*, **88**, 419 (1987).  
 2. Virtanen, I., et al., *Histochemistry*, **90**, 25 (1988).  
 3. Laitinen, L., et al., *Abstr. 144: Int. Congr. Acad. Path.*, Dublin (1988).

693201 10 µg  
 693202 50 µg

# Immunobiologicals

CATALOG NUMBER

692071 **FIBRONECTIN** 0.5 mg  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** F3  
**Isotype:** mouse IgG<sub>1</sub> presented purified from ascites fluid  
**Applications:** Indirect Immunofluorescence; Immunoblotting

55125 **FIBRONECTIN** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** lyophilized  
**Applications:** ELISA; Immunoblotting; Immunostaining.

55037 **FIBRONECTIN** 5 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** lyophilized (IgG)  
**Applications:** ELISA; Immunoblotting; Immunostaining.

10707 **FIBRONECTIN** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 568  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen tissue sections, and formalin-fixed, paraffin-embedded tissue sections.  
 The antibody was prepared from human fibroblasts. The antibody reacts with the cell binding part of fibronectin. It is supplied as clarified tissue culture supernatant with 0.09% sodium azide and 1% BSA.  
**Ref.:** Christensen, L., et al., *APMIS*, **suppl. 26**, 1-39 (1992).

55240 **FIBRONECTIN** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** lyophilized (IgG)  
**Applications:** ELISA; Immunoblotting; Immunostaining.  
**HRP Conjugated**

55065 **FIBRONECTIN** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** lyophilized (F(ab')<sub>2</sub>)  
**Applications:** ELISA; Immunoblotting; Immunostaining.

55193 **FIBRONECTIN** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** lyophilized F(ab')<sub>2</sub>  
**Applications:** ELISA; Immunoblotting; Immunostaining.  
**FITC Conjugated**

CATALOG NUMBER

**FIBRONECTIN**  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** lyophilized  
**Applications:** ELISA; Immunoblotting; Immunostaining.  
 55126 2 ml  
 55038 5 ml

55066 **FIBRONECTIN** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** lyophilized (F(ab')<sub>2</sub>)  
**Applications:** ELISA; Immunoblotting; Immunostaining.

640781 **FIBRONECTIN** 1 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** sheep  
**Form:** purified antiserum  
**Applications:** Immunoblotting

55632 **FIBRONECTIN** 5 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Rabbit**  
**Host:** goat  
**Form:** lyophilized (IgG)  
**Applications:** ELISA; Immunoblotting; Immunostaining.

**LAMININ**

**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** HL-4H3  
**Isotype:** purified mouse IgG<sub>1</sub>  
**Conc/Titer:** 500µg/ml  
**Applications:** Immunoassay  
 This antibody reacts specifically with the P-1 fragment from human placental laminin.  
 631691 100 µg  
 631692 250 µg  
 631693 500 µg

**LAMININ**

696101 **MONOCLONAL ANTIBODY** 0.2 ml  
**Anti-Laminin**  
**Clone:** LAM-1  
**Isotype:** partially purified rat IgG<sub>2b</sub>  
**Conc/Titer:** 1:10,000  
**Applications:** ELISA  
 This antibody is supplied at a concentration of ≥5mg/ml in a PBS buffer, pH 7.4, with 0.1% sodium azide. It is purified from cell culture supernatant fluids by Amicon Minicon Concentration and/or ammonium sulfate precipitation and chromatographically purified as needed. Typical EIA titer is ~1:10,000. Indirect immunofluorescent titer on frozen tissue is ~1:20. It is directed to the GP-2 subunit of laminin and reacts with the 220,000 dalton polypeptide component of laminin isolated from mouse M1536-B3 cells. It also reacts with laminin in frozen tissue samples from a variety of species, including human and mouse.

CATALOG  
NUMBER

**10765** **LAMININ** 0.25 ml  
0-5°C  
**POLYCLONAL ANTIBODY**  
**Anti-Mouse**  
**Host:** rabbit  
**Form:** liquid  
**Conc/Titer:** 1:50-1:100  
**Applications:** ELISA; Immunoblotting; Immunostaining of acetone-fixed frozen and formalin-fixed, paraffin-embedded tissue sections.  
The original antigen was laminin isolated from EHS mouse sarcoma. The antibody cross-reacts to most species including human, mouse, rat, rabbit, bovine, and swine. It reacts specifically to laminin in ELISA and to 200-220 kDa laminin component from 8M urea extract of amnion basement membrane in immunoblotting.  
**Ref.:** Bosman, F.T., et al., *Ultrastructural Pathology*, **8**, 291-304 (1985).

**681251** **LAMININ** 0.25 ml  
0-5°C  
**POLYCLONAL ANTIBODY**  
**Anti-Mouse**  
**Host:** rabbit  
**Form:** liquid antiserum  
**Conc/Titer:** 1:50-1:100  
**Applications:** Immunoblotting  
The antiserum was produced in rabbits by immunization with laminin isolated from EHS-mouse sarcoma. Antibodies to laminin localize exclusively in basement membranes and more intensely in the lamina lucida. This antiserum is reactive on frozen tissue and on formalin-fixed paraffin embedded tissue with a pepsin pretreatment. Anti-Laminin had been tested on human, rat, mouse, bovine, and porcine tissues and found positive.

**696202** **PROTEOGLYCAN DI 0S** 0.1 ml  
-20°C  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 1-B-5/C5  
**Isotype:** IgG<sub>1κ</sub>  
**Conc/Titer:** 1:50-1:3,200  
**Applications:** IFA, EIA, RIA

**696371** **PROTEOGLYCAN DI 4S** 0.1 ml  
-20°C  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 2-B-6  
**Isotype:** mouse IgG<sub>1κ</sub>  
**Conc/Titer:** 1:50-1:6,400  
**Applications:** IFA, EIA, RIA

**696361** **PROTEOGLYCAN DI 6S** 0.1 mg  
-20°C  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 3-B-3/C1  
**Isotype:** mouse IgM<sub>κ</sub>  
**Conc/Titer:** 1:50-1:1,600  
**Applications:** IFA, EIA, RIA

CATALOG  
NUMBER

**TENASCIN**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** EB2  
**Isotype:** mouse IgG<sub>1</sub> presented affinity purified  
**Conc/Titer:** 1 mg/ml  
**Applications:** Immunohistochemistry; Immunoblotting  
The original immunogen was purified tenascin from fetal fibroblasts. The antibody reacts with human tenascin polypeptides of molecular weight 180 and 250 kDa. It can be used as a marker for malignancy.

**693211** 10 µg  
**693212** 50 µg

**10708** **TENASCIN** 1 ml  
0-5°C  
**MONOCLONAL ANTIBODY**

**Anti-Human**  
**Clone:** T2 H5  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen tissue sections, and formalin-fixed, paraffin-embedded (microwaved) tissue sections. The original antigen was isolated from mammary tumor cells. The antibody reacts specifically to at least 210 and 300 kDa forms of tenascin in immunoblotting. Tenascin is an extracellular matrix protein which is present during embryonic development and apparently regulates epithelial differentiation. It is not found in mature tissues, but reappears during tissue regeneration and repair and in neoplasia. It is supplied as clarified ascites with Tris Buffer with 1% BSA and 0.09% sodium azide.  
**Ref.:** 1. Bosman, F.T., et al., *Progr. Histochem. Cytochem.*, **24**(4), 1-92 (1992).  
2. Koukoulis, G.K., et al., *Human Pathol.*, **22**, 636-643 (1991).

**659241** **VITRONECTIN** 1 ml  
0-5°C  
**POLYCLONAL ANTIBODY**

**Anti-Human**  
**Host:** rabbit  
**Form:** liquid  
**Conc/Titer:** 50 µg/ml.  
**Applications:** 2-D immunoelectrophoresis, electroimmunodiffusion.

**VITRONECTIN**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** BE10  
**Isotype:** mouse IgG<sub>1</sub> presented affinity purified  
**Conc/Titer:** 1 mg/ml  
**Applications:** Immunohistochemistry; Immunoblotting  
The original immunogen was purified vitronectin from human plasma. This antibody is specific for vitronectin and does not cross react with other matrix molecules.

**693251** 10 µg  
**693252** 50 µg

## Antibodies to Human Leukocyte Antigens

The identification and classification of human leukocytes by the presence of cell surface antigens (immunophenotyping) includes T cells, B cells, monocytes, macrophages, myeloid cells, tumor cells, thymocytes, neutrophils and other related cell types. The analysis of cell surface antigens is useful for the detection of both normal and abnormal cells which differ depending on various states of disease. The International Workshop on Differentiation Antigens of human leukocytes has developed a commonly utilized system for referring to antibodies used for phenotyping. Those antibodies with similar antigenic reactivity are assigned to a "Cluster" and a designation has been assigned to each group.

### Cluster Determinant Antibodies

#### ANTI-HUMAN

Cat. No.	Specificity	Clone	Quantity
685691	CD1c	PHM-3	0.5 ml
685791	CD3	UCHT-1	0.2 mg
685811	CD3, FITC	UCHT-1	0.2 mg
691961	CD4	BF5	1 ml
685881	CD5, FITC	7.8	0.1 mg
685701	CD7	HuLy-m2	0.5 ml
691951	CD8	MAT 8	1 ml
685751	CD11b	44	0.2 mg
685911	CD11c	3.9	0.2 mg
690921	CD13	CLB302	1 ml
685581	CD13	M13	0.5 ml
685561	CD14	2D-15C	0.5 ml
690931	CD14	CLB-MON/1.8G3	1 ml
685591	CD15	ZC-18C	0.5 ml
685601	CD15, FITC	ZC-18C	0.5 ml
685621	CD16	BL-LGL/1	0.5 ml
10907	CD19	BC-3	1 ml
685371	CD19	B19	0.5 ml
685381	CD19, FITC	B19	0.5 ml
10904	CD20	B-ly-1	1 ml
10906	CD21	B-ly-4	1 ml
690941	CD22	CLB133	1 ml
685921	CD30	Ki-1	0.1 mg
685571	CDw32	ClKm5	0.5 ml
685611	CD33	M33	0.5 ml
685631	CD41	290AS-10	0.5 ml
685641	CD42a	FMC-25	0.5 ml
10905	CD43	MT1	1 ml
685521	CD45	T200	0.5 ml
10900	CD45r	MB1	1 ml
10901	CD45r	MB2	1 ml
10902	CD45r	MB3	1 ml
10029	CD45ro	UCHL 1	1 ml
685941	CD45ro	UCHL 1	0.1 mg
10709	CD49f	GoH3	1 ml
685531	CD47	ClKm 1	0.5 ml
685981	CD57	NK-1	0.1 mg
685991	CD57, FITC	NC-1	0.1 mg
685541	CD59	2/24	0.5 ml
690901	CD61	CLB37	1 ml
693031	CD74	LN-3	4 ml
693011	CDw75	LN-1	4 ml

## HLA Associated Antibodies

### ANTI-HUMAN

Cat. No.	Specificity	Clone/Host	Quantity
685431	B Cells	FMC-7	0.5 ml
633671	B Cells, FITC	FMC-7	1 ml
693021	B-Lymph. Surface Antigen	LN-2	4 ml
693091	B-Lymph. Surface Antigen	LN-8	4 ml
10915	Common Leuk. Antigen	BRA55	1 ml
10705	Endothelial Marker (veins)	PAL-E	1 ml
685681	Epithelial/Endothelial Cells	18.29	0.5 ml
647361	EMA	sh	1 ml
57043	P-Glycoprotein	JSB-1	1 ml
685451	HLA-ABC, Common	PHM-4	0.5 ml
685461	HLA-ABC, Common, FITC	PHM-4	0.5 ml
659291	HLA-B7	BB7.1	1 ml
685471	HLA-B27	HLA-ABC-m3	0.5 ml
685481	HLA-B27, FITC	HLA-ABC-m3	0.5 ml
685761	HLA-B27, EZ™, FITC	HLA-ABC-m3	0.5 ml
685711	HLA-DQ	la3	0.2 mg
685721	HLA-DQ, Biotin	la3	0.2 mg
685491	HLA-DR	169-1B5	0.5 ml
685501	HLA-DR, FITC	169-1B5	0.5 ml
685511	HLA-DR, PE	169-1B5	0.5 ml
10709	α-6 Integrin	GoH3	1 ml
693241	αIIb-Integrin	CA3	10 µg
693242			50 µg
693221	β <sub>1</sub> -Integrin	DF 5	10 µg
693222			50 µg
693231	β <sub>3</sub> -Integrin	BB10	10 µg
693232			50 µg
692401	Leukocytes	MB-1	1 ml
685551	Leukocytes	5-4.8	0.5 ml
693051	Macrophage	LN-5	4 ml
637552	β <sub>2</sub> -Microglobulin		0.25 ml
685441	β <sub>2</sub> -Microglobulin	246.E9.E7	0.5 ml
693001	Myeloid Cells	BM-1	4 ml
698001	Neutrophil/Myeloblast	PMN13F6	0.2 ml
698011	Neutrophil/Promyelocyte	PMN7C3	0.2 ml
698021	Neutrophil/Metamyelocyte	PMN8C7	0.2 ml
10912	T8 Cells	T8	1 ml



## Antibodies for Signal Transduction

The enormous interest in the areas of Signal Transduction, including Neuroscience, has created a significant demand for high quality antibodies for the investigation into the development, differentiation, heterogeneity and localization of neuronal and non-neuronal cell types. Additionally, these antibodies provide insight into the mechanisms and cellular processes associated with cancer, apoptosis, immune response, cell-cell interactions, and neurodegenerative disorders. Likewise, they play an important role in targeting the development of new therapies and studying the synthesis, transport and secretion of proteins, hormones and neurotransmitters.

ICN offers a diverse selection of both monoclonal and polyclonal antibodies highly characterized for signal transduction and neuroscience research. All products are assured for quality and performance in various applications including immunoblotting, immunohistochemistry and immunostaining. If you do not find a particular antibody, we recommend contacting ICN directly at [biomark@icnbiomed.com](mailto:biomark@icnbiomed.com).

### Monoclonal Antibodies to Tyrosine Kinase Substrates

Tyrosine-specific protein kinases are believed to control cellular proliferation, differentiation and other critical metabolic processes through the phosphorylation of certain normal cellular proteins. ICN's breakthrough PY20 monoclonal antibody to phosphotyrosine has led to the discovery and subsequent identification of numerous tyrosine-phosphorylated proteins in gels and Western blots. In many instances, the phosphorylation is known to result in an altered biological function. In others, no significant effects on the biological activity has been reported.

In addition, the phosphorylation of tyrosine residues is a characteristic of numerous oncogene protein kinases and growth factor receptors.<sup>1,2</sup> The characterization of these tyrosine kinase substrates involved in oncogenesis and growth regulation requires methods of identification and isolation. Early studies indicated that polyclonal antibodies to phosphotyrosine could be produced which may serve useful in detecting substrates of tyrosine protein kinase encoded by oncogenes and growth factor receptors.<sup>3,4</sup> However, polyclonal antibodies are limited because all antibodies compete for a single antigenic determinant.<sup>1</sup> Thus, monoclonal antibodies to phosphotyrosine offer the distinct advantage of a homogenous reagent to analyze these substrates. ICN currently offers two such antibodies which can be efficiently utilized in both immunoblotting and immunoaffinity purification techniques. PY20 and PY69 demonstrate superior performance in Western blot analysis and 100-fold lower half-maximal inhibition with tyrosine than other commercially available products.

#### References:

1. Glenney, J.R., Jr., et al., *J. Immunol. Meth.*, **109**, 277 (1988).
2. Glenney, J.R., Jr., et al., *Cell*, **52**, 675 (1988).
3. Kamps, M.P. and Sefton, B.M., *Oncogene*, **2**(4), 305 (1988).
4. White, M.F., et al., *Nature*, **318**, 183 (1985).

#### PY20 and PY69 Advantages:

- Protein phosphorylated on tyrosine can be detected by standard western blots, ELISA, fluorescence, immunoprecipitation and immunocytochemical methods.
- These antibodies display a significantly higher avidity than other commercially available products.
- Both PY20 and PY69 will bind protein A directly.
- Both antibodies are excellent markers of activated cells.
- PY20 and PY69 will block internalization of the activated EGF receptor.
- They are compatible with most commonly used detergents.

#### Anti-Phosphotyrosine and Conjugates

Cat. No.	Titer	Host/Isotype	Quantity
Anti-Phosphotyrosine (clone PY20)			
691371	1:1000	mo IgG <sub>2b</sub>	100 µg
Anti-Phosphotyrosine (clone PY20), Biotin			
691501	1:6000	mo IgG <sub>2b</sub>	100 µg
Anti-Phosphotyrosine (clone PY20), FITC6			
91531	1:1000	mo IgG <sub>2b</sub>	50 µg
Anti-Phosphotyrosine (clone PY20), HRP			
691511	1:1000	mo IgG <sub>2b</sub>	100 µg
Anti-Phosphotyrosine (clone PY20), TRITC			
691521	1:1000	mo IgG <sub>2b</sub>	50 µg
Anti-Phosphotyrosine (clone PY20), <sup>125</sup> I			
68095	1:1000	mo IgG <sub>2b</sub>	25 µCi 50 µCi
Anti-Phosphotyrosine (clone PY69)			
691381	1:1000	mo IgG <sub>2a</sub>	100 µg
Anti-Phosphotyrosine (polyclonal)			
681301	1:2000	rb	100 µg

#### Related Products

Cat. No.	Quantity
Phosphotyrosine Negative Control (NIH 3T3 lysate)	
771131	125 µg
Phosphotyrosine Positive Control (RSV 3T3 lysate)	
771141	125 µg

## Antibodies to Phospholipid Binding Proteins (Annexins)

For those researchers investigating the properties and function of calcium-dependent phospholipid binding proteins, ICN offers numerous antibodies to Annexins. These antibodies are extremely useful for studying various cellular functions.

Under the names lipocortin I, calpactin II, chromobindin 9 and p35, Annexin I has been shown to be a mediator of corticosteroid activity, a component of the cytoskeleton and substrate for serine/threonine kinases and growth regulated tyrosine kinases. Furthermore, it has been noted to be involved in secretion. Annexin II, also known as lipocortin II, calpactin I, p36, chromobindin 8, protein I and PAP-IV, is a structurally unique member of the annexin family with similar functions as Annexin I. Additionally, it is usually found tightly associated to an 11 kDa light chain forming a heterotetramer with 2 subunits of each type. Other annexins are monomeric.

As 32.5K calelectrin and 67K calelectrin, Annexins IV and VI have been shown to be involved in calcium ion signalling, as well as, those activities described for Annexins I and II. Annexin IV is also known as endoexin I, protein II, lipocortin IV, chromobindin IV, PAP II, PP4-X and 35 $\beta$  calcimedlin. Annexin VI is also known as lipocortin VI, protein III, chromobindin 20, calphobindin II, p68, p70 and 73K.

Some members of the Annexin family have demonstrated the ability to possess significant amino acid sequence homology, having a common 70 amino acid domain that is repeated four or eight times. The similarities in structure and chemical properties among the various members of the annexin family suggests that they probably serve similar functions in vivo. Yet, each Annexin has a distinct amino terminal domain which may bestow on them a functional specificity.

ICN's antibodies to specific Annexins are proven valuable in the investigation of the function and characteristic of each protein. The characterization of Annexin I (p35) as a substrate for EGF utilized the specific immunoprecipitation of Annexin I while the distribution of Annexin I and Annexins V during cell growth and differentiation was elucidated with the use of specific antibodies. Furthermore, monoclonal antibodies to Annexin I affected the calcium ion binding properties and tyrosine phosphorylation of the protein.

ICN's monoclonal antibodies to specific Annexins are available individually or as a kit containing 10  $\mu$ g of each. In addition, each order of purified antibody is accompanied with a complimentary sample of the purified protein for use as a positive control. All antibodies react strongly with human tissue, but will also react with those derived from other mammalian species. They are supplied as 1 mg/ml in 50% glycerol, 5 mM Tris, 25 mM NaCl, 1.5 mM sodium azide and pH 8.2. They are highly purified fractions of mouse IgG<sub>1</sub> isotype from ascites and are suitable for immunoblotting, ELISA and immunohistochemical techniques. The recommended working dilution is 1:5000 for western blotting and they can be conjugated to fluorochromes or enzymes.

### References:

1. Drust, D.S. and Creutz, C.E., *Nature*, **331**, 88 (1988).
2. McKanna, J.A. and Cohen, A., *Science*, **243**, 1477 (1989).
3. Ross, T.S., et al., *Science*, **246**, 605 (1990).
4. Saris, C.J.M., et al., *Cell*, **46**, 201 (1986).
5. Zokas, L. and Glenney, J.R. Jr., *J. Cell Biol.*, **105**, 2111 (1987).

### Annexin Antibodies

Cat. No.	Specificity	Clone	Quantity
691542	Annexin I	II-29	100 $\mu$ g
691552	Annexin II	CPI-50	100 $\mu$ g
691581	Annexin II, Light Chain	LC148	100 $\mu$ g
691561	Annexin IV		100 $\mu$ g
691571	Annexin V	73-5-4	100 $\mu$ g

## Apoptosis Antibodies

**NEW** 632121 -20°C **CALPAIN** 100  $\mu$ g  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 28F3  
Isotype: IgG<sub>1</sub>  
Conc/Titer: 1:500-1:2,000  
Applications: ELISA; Immunoblotting; Immunoprecipitation; Apoptosis

**NEW** 632132 632131 **CALPAIN p30** 500  $\mu$ l  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 28F3  
Isotype: IgG<sub>1</sub>  
Conc/Titer: 1:40  
Immunoprecipitation; Apoptosis  
Agarose Conjugated  
DO NOT FREEZE 1 ml

**NEW** 632141 -20°C **CALPAIN I, p80** 100  $\mu$ g  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 15C10  
Isotype: IgG<sub>1</sub>  
Conc/Titer: 1:500-1:2,000  
Applications: Immunoblotting; ELISA; Immunoprecipitation

**NEW** 632111 -20°C **RIN** 100  $\mu$ g  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 18G4  
Isotype: IgG  
Conc/Titer: 1:1000  
Ras family GTPase

**NEW** 632151 -20°C **14-3-3 teta/tau** 100  $\mu$ g  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 3B9  
Isotype: IgG  
Conc/Titer: 1:2000  
Applications: Immunoblotting; ELISA; Apoptosis  
The 14-3-3 proteins are thought to be key regulators of signal transduction events and through interaction with Bad, prevent apoptosis

CATALOG  
NUMBER

## Other Signal Transduction Antibodies

### CAVEOLIN

**MONOCLONAL ANTIBODY**  
(22kDa RSV-SRC Substrate, Anti-)

**Clone:** 2283

**Isotype:** purified Ig fraction from mouse ascites

**Conc/Titer:** 1:1,000-1:5,000

**Applications:** ELISA; Immunoblotting; Immunoprecipitation; Immunohistology  
It has been suggested that this protein is a mediator of transformation by the tyrosine kinase class of oncogenes. For this product, a monoclonal antibody (ICN PY20) was coupled to agarose and used as an affinity chromatography medium to isolate phosphotyrosine-containing proteins from Rous sarcoma virus-transformed chick embryo fibroblasts. Balb/c mice were immunized with these PY20 proteins for production of antibodies to the 22 kDa tyrosine kinase substrate. Hybridomas were selected for reactivity against the mixture of PY-proteins by ELISA and against the 22 kDa protein by Western Blot.

The antibody is packaged at a concentration of 1 mg/ml in 50% glycerol, 5mM Tris, pH 8.2, 25mM NaCl, 1.5 mM NaN<sub>3</sub>. It is easily conjugated to enzymes and fluorochromes.

**Ref.:** 1. Glenney, J.R., Jr., *J. Biol. Chem.*, **264**, 20163-20166 (1989).  
2. Glenney, J.R., Jr. and Zokas, L., *J. Biol. Chem.*, **108**, 2401-2408 (1989).

697002

50 µg

697001

100 µg

### GTPase ACTIVATING PROTEIN

100 µg

694201  
-20°C

**MONOCLONAL ANTIBODY**

(GAP, Anti)

**Clone:** GAP13

**Isotype:** IgG<sub>1</sub>

**Conc/Titer:** 1:1,000

**Applications:** Immunoblotting

Tyrosine phosphorylation of GAP, an activating protein for the GTPase activity of *ras*, is stimulated by several tyrosine kinases, including EGF, PDGF, CSF-1 and several oncogene products.

The amino acid sequence of this peptide is as follows:

NH<sub>2</sub>-Thr-Pro-Gly-Asp-Tyr-Ser-Leu-Tyr-Phe-Arg-COOH.

The antibody is packaged at a concentration of 1 mg/ml in 40% glycerol, 20mM sodium phosphate, pH 7.5, 150mM NaCl, 3mM sodium azide.

A dilution of 1:1000 is suggested for Western Blot and other immunochemical techniques.

**Ref.:** 1. Molloy, C.J., et al., *Nature*, **342**, 711-714 (1989). 2. Kaplan, et al., *Cell*, **61**, 125-133 (1990). 3. Reedijk, M., *Mol. Cell. Biol.*, **10**, 5601-5608 (1990).

NEW  
632191  
-20°C

**HA**

100 µg

**MONOCLONAL ANTIBODY**

**Anti-Human**

**Clone:** 12CA5

**Isotype:** IgG<sub>2b</sub>

**Conc/Titer:** 1:1000

**Applications:** immunoblotting; ELISA

CATALOG  
NUMBER

### MAP-II KINASE

100 µg

692001  
-20°C

**ANTIBODY**

**Anti-Human**

**Clone:** MK12

**Isotype:** mouse IgG<sub>2b</sub>

**Conc/Titer:** 1:5000

**Applications:** immunoblotting; immunohistology; immunofluorescence

This 42 kDa serine/threonine kinase is tyrosine phosphorylated upon stimulation of cells with EGF, PDGF or insulin. Enzyme activity is dramatically increased upon tyrosine phosphorylation.

A synthetic peptide corresponding to positions 325-345 of the intact MAP kinase was used as the immunogen to produce this antibody. This antibody demonstrates other species reactivity with dog, rat, mouse, chicken and frog.

**Ref.:** 1. Ray, L.B. and Sturgill, T.W., *Proc. Nat. Acad. Sci. USA*, **84**, 1502-1506(1987).  
2. Rossomando, A.J., et al., *Proc. Nat. Acad. Sci. USA*, **86**, 6940-6943 (1989).

### MATRIX METALLOPROTEINASE 1

**MONOCLONAL ANTIBODY**

**Anti-Human**

**Clone:** 41-1E5

**Isotype:** purified mouse IgG<sub>2a</sub>

**Conc/Titer:** 500µg/ml

**Applications:** Immunoassay

This antibody reacts specifically with human matrix metalloproteinase 1.

631781

100 µg

631782

250 µg

631783

500 µg

### MATRIX METALLOPROTEINASE 2

**MONOCLONAL ANTIBODY**

**Anti-Human**

**Clone:** 42-5D11

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 500µg/ml

**Applications:** Immunoassay

This antibody reacts specifically with human matrix metalloproteinase 2.

631791

100 µg

631792

250 µg

631793

500 µg

### MATRIX METALLOPROTEINASE 2 TISSUE INHIBITOR

**MONOCLONAL ANTIBODY**

**Anti-Human (Anti-hTIMP-2)**

**Clone:** 67-4H11

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 500µg/ml

**Applications:** Immunoassay

This antibody reacts specifically with human tissue inhibitor of metalloproteinases II.

631811

100 µg

631812

250 µg

631813

500 µg

CATALOG  
NUMBER

## MATRIX METALLOPROTEINASE 3

### MONOCLONAL ANTIBODY

Anti-Human

Clone: 55-2A4

Isotype: purified mouse IgG<sub>1</sub>

Conc/Titer: 500µg/ml

Applications: Immunoassay

This antibody reacts specifically with human matrix metalloproteinase 3.

631771	100 µg
631772	250 µg
631773	500 µg

## MATRIX METALLOPROTEINASE 9

### MONOCLONAL ANTIBODY

Anti-Human

Clone: 56-2A4

Isotype: purified mouse IgG<sub>1</sub>

Conc/Titer: 500µg/ml

Applications: Immunoassay

This antibody reacts specifically with human matrix metalloproteinase 9.

631801	100 µg
631802	250 µg
631803	500 µg

NEW  
632181  
-20°C

## c-Myc

### MONOCLONAL ANTIBODY

Anti-Human

Clone: 9E10

Isotype IgG<sub>1</sub>

Conc/Titer: 1:1000

Applications: immunoblotting; ELISA

100 µg

696002	50 µg
696001	100 µg

## PAXILLIN

### MONOCLONAL ANTIBODY

Anti-Human

Clone: 349

Isotype: purified Ig fraction from mouse ascites

Conc/Titer: 1:1,000-1:5,000

Applications: Immunoblotting; Immunoprecipitation

Paxillin localizes to the focal adhesions at the ends of actin stress fibers in chicken embryo fibroblasts. It is present in the focal adhesions of the Madin-Darby bovine kidney epithelial cells but is absent from cell-cell adherens junctions of these cells. When purified from chicken gizzard, it migrates as a diffuse band on SDS-PAGE with M<sub>r</sub> of 65-70 kDa and exists in multiple isoforms.

The antibody is packaged at a concentration of 1 mg/ml in 50% glycerol, 5mM TRIS, pH 8.2, 25mM NaCl, 1.5mM NaN<sub>3</sub>.

CATALOG  
NUMBER

## PHOSPHOLIPASE C<sub>γ</sub>

695001

-20°C

### MONOCLONAL ANTIBODY (PLC<sub>γ</sub>)

Anti-Bovine

Clone: PLC 3 10

Isotype: purified IgG

Conc/Titer: 1:1,000

Applications: ELISA; Immunoblotting

PLC<sub>γ</sub> hydrolyzes phosphatidyl inositol-4-5 biphosphate and diacylglycerol,<sup>1</sup> the former acting as a second messenger in calcium signaling and the latter becoming an activator of protein Kinase C.

A synthetic peptide corresponding to positions 1040-1057 of the bovine brain enzyme was used as the immunogen.

It is supplied at a concentration of 1 mg/ml in 40% glycerol, 20 mM sodium phosphate, pH 7.5, 150 mM NaCl & 3 mM NaN<sub>3</sub>.

Ref: 1. Rhee, S.G., et al., *Science* **244**, 546 (1989).

2. Nishibe, et al., *J. Biol. Chem.* **264**, 10335 (1990).

100 µg

## PROLYL 4-HYDROXYLASE

### MONOCLONAL ANTIBODY

Anti-Human α-hPH

Clone: 9-47H10

Isotype: purified mouse IgG<sub>1</sub>

Conc/Titer: 500µg/ml

Applications: Immunoassay

This antibody reacts specifically against the α-subunit of human prolyl 4-hydroxylase.

631631	100 µg
631632	250 µg
631633	500 µg

## PROLYL 4-HYDROXYLASE

### MONOCLONAL ANTIBODY

Anti-Human β-hPH

Clone: 3-2B12

Isotype: purified mouse IgG<sub>1</sub>

Conc/Titer: 500µg/ml

Applications: Immunoassay

This antibody reacts specifically against the β-subunit of human prolyl 4-hydroxylase.

631641	100 µg
631642	250 µg
631643	500 µg

CATALOG  
NUMBER

**PROLYL 4-HYDROXYLASE ( $\alpha$ -Subunit)**

**MONOCLONAL ANTIBODY**

**Anti-Rat  $\alpha$ -Subunit**

**Clone:** 6-6H2

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 500  $\mu$ g/ml

**Applications:** Immunoassay

This antibody reacts specifically with the  $\alpha$ -subunit of prolyl 4-hydroxylase from rat embryo skin.

631671	100 $\mu$ g
631672	250 $\mu$ g
631673	500 $\mu$ g

**PROLYL 4-HYDROXYLASE ( $\beta$ -Subunit)**

**MONOCLONAL ANTIBODY**

**Anti-Rat  $\beta$ -Subunit**

**Clone:** 6-9H6

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 500  $\mu$ g/ml

**Applications:** Immunoassay

This antibody reacts specifically with the  $\beta$ -subunit of prolyl 4-hydroxylase from rat embryo skin.

631681	100 $\mu$ g
631682	250 $\mu$ g
631683	500 $\mu$ g

**PROTEIN KINASE C ISOZYME KIT**

1 vial

321831

-20°C

**Anti-PKC Mix**

**Clones:** MC-1a (type I); MC-2a (type II); MC-3a (type III)

**Isotype:** IgG<sub>2b</sub> (I); IgG<sub>2a</sub> (II); IgG<sub>1</sub> (III)

**Conc/Titer:** 1:20-1:100

**Applications:** immunoblotting; immunohistochemistry

This monoclonal mix is reactive against PKC- $\psi$  (type I),

PKC- $\beta$  (type II) and PKC- $\alpha$  (type III). It is recommended that each lab determine the optimum working dilution for a particular assay.

**Ref.:** Hidaka, H., et al., J. Biol. Chem., **263**, 4523 (1988).  
2. Huang, K.P., et al., Proc. Natl. Acad. Sci. USA, **83** 8535 (1986).

NEW

632201

-20°C

**RIT**

100  $\mu$ g

**MONOCLONAL ANTIBODY**

**Anti-Human**

**Clone:** 14G7

**Isotype:** IgG

**Conc/Titer:** 1:1000

**Applications:** immunoblotting; ELISA

Protein expression tag

CATALOG  
NUMBER

**TIMP-1**

**MONOCLONAL ANTIBODY**

**Anti-Bovine**

**Clone:** 7-6C1

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 500  $\mu$ g/ml

**Applications:** Immunoassay

This antibody reacts specifically with bovine TIMP-1 and shows cross-reactivity to human TIMP-1.

631651	100 $\mu$ g
631652	250 $\mu$ g
631653	500 $\mu$ g

**TIMP-1**

**MONOCLONAL ANTIBODY**

**Anti-Human**

**Clone:** 50-3D2

**Isotype:** purified mouse IgG<sub>1</sub>

**Conc/Titer:** 500  $\mu$ g/ml

**Applications:** Immunoassay

This antibody reacts specifically with human TIMP-1.

631661	100 $\mu$ g
631662	250 $\mu$ g
631663	500 $\mu$ g

NEW **TIMP-3**

**MONOCLONAL ANTIBODY**

**Anti-Human**

**Clone:** 136-13H4)

**Isotype:** purified mouse IgG<sub>1/ $\kappa$</sub>

This antibody reacts specifically with hTIMP-3 and cross-reacts with rabbit TIMP-3. It does not react with hTIMP-1 or hTIMP-2.

631881	100 $\mu$ g
631882	250 $\mu$ g
631883	500 $\mu$ g



# Immunobiologicals

## Antibodies for Neuroscience

Generally, researchers use central nervous system (CNS) cell cultures to study cell types, their structure and function. Cultures derived from cells of the CNS can be characterized using antibodies directed against specific markers expressed by the cells. Additionally, antibodies may be used to identify contaminating cell types such as fibroblasts and endothelial cells. The following table details antibodies for neural cell type identification.

Cell Type	Antibody Type
Neurons	NF 68 NF 160 NF 200
Astrocytes	GFAP Vimentin
Oligodendrocytes	GalC CNPase, S100
Schwann Cells	CNPase, S100
Fibroblasts	Vimentin Fibronectin
Endothelial Cells	Vimentin

Cat. No.	Specificity	Clone/Host	Quantity
688021	ACTH	rb	1 ml
11150	ACTH	rb	0.25 ml
693281	$\gamma$ -Aminobutyric Acid	AD5A9	10 $\mu$ g
693282			50 $\mu$ g
10703	Amyloid AA	REU-86.2	1 ml
640021	APP	gt	100 $\mu$ l
640022			250 $\mu$ l
640023			500 $\mu$ l
640031	APPFM	gt	100 $\mu$ l
640032			250 $\mu$ l
640033			500 $\mu$ l
640041	APP N-Terminal Peptide	gt	100 $\mu$ l
640042			250 $\mu$ l
640043			500 $\mu$ l
657821	Calmodulin	gt	1 ml
11421	N-CAM	RNL 1	1 ml
693281	GABA	AD5A9	10 $\mu$ g
693282			50 $\mu$ g
691102	GFAP	GA5	1 ml
691821	GFAP	8	1 ml
10555	GFAP	rb	0.25 ml
10505	GFAP	6F2	1 ml
638002	MAP-1	HM-1	0.1 ml
638012	MAP-2	HM-2	0.1 ml
638022	MAP-5	AA6	0.1 ml
657832	MAPs	rb	0.5 ml
657831			1 ml
614971	Morphine-BSA	rb	1 ml
10700	Myelin	2B5	1 ml
697031	Neurofilament 68	NR4	0.2 ml
697041	Neurofilament 160	NN18	0.2 ml
10512	Neurofilament 160	NF 403	1 ml
697051	Neurofilament 200	NE 14	0.2 ml
691841	Neurofilament 200	402	1 ml
10511	Neurofilament 200	NF 402	1 ml
10510	Neurofilament 68/200	10510	1 ml
688091	Neuron Specific Enolase	rb	0.2 ml
688092			1 ml
647091	Neurophysin II	rb	0.25 ml
647101	Neurotensin	rb	0.25 ml
11188	Neurotensin	rb	0.25 ml
647421	Paired Helical Filaments	rb	0.25 ml

Cat. No.	Specificity	Clone/Host	Quantity
640081	Parkin N-Terminal Peptide	gt	100 $\mu$ l
640082			250 $\mu$ l
640083			500 $\mu$ l
637511	Parvalbumin	PA-235	0.5 ml
11420	S 100	rb	0.25 ml
647411	S 100	rb	0.25 ml
640061	Presenilin-1 Peptide (S182)	gt	100 $\mu$ l 250 $\mu$ l 500 $\mu$ l
640071	Presenilin-2 Peptide (STM2)	gt	100 $\mu$ l 250 $\mu$ l 500 $\mu$ l
640051	Prion PrP <sub>27-30</sub> Peptide	gt	100 $\mu$ l 250 $\mu$ l 500 $\mu$ l
11160	Serotonin	rb	0.25 ml
647131	Serotonin	rb	0.25 ml
697301	Synaptophysin	SY38	50 $\mu$ g
10701	Synaptophysin	SY38	1 ml
10706	Synaptophysin	rb	0.25 ml
640011	$\alpha$ -Synuclein C-Terminal Peptide	gt	100 $\mu$ l 250 $\mu$ l
640013			500 $\mu$ l
638032	Tau	TAU-2	0.1 ml
657842	Tau	rb	0.5 ml
638042	Tubulin, Tyrosine	TUB-1A2	0.25 ml

## Antibodies to Growth Factors/Cytokines

### Antibodies to Colony Stimulating Factor

Cat. No.	Specificity	Clone/Host	Quantity
694461	hGM-CSF	rb	0.25 ml
694462			0.5 ml
696301	hG-CSF	rb	50 $\mu$ g
695101	CSF	sh	500 $\mu$ l

### Antibodies to Epidermal Growth Factor

Epidermal Growth Factor (EGF) is one of the best known and highly characterized growth factors. It is a small mitogenic polypeptide of 53 amino acid residues and has a molecular weight of 6045 daltons. EGF stimulates epidermal cells and a variety of other cell types to divide by binding to receptor proteins on the cell surface. Binding of EGF to the receptor stimulates a chain of events including clustering of receptor molecules, activation of the receptor's kinase activity and endocytosis of receptor molecules.

658251	mEGF	rb	0.1 ml
691281	hEGF Receptor	c11	100 $\mu$ g
691292	hEGF Receptor	74	50 $\mu$ g
691291			100 $\mu$ g
694301	hEGF Receptor	sh	100 $\mu$ g

### Antibodies to Interferons

650591	hINF- $\alpha$	sh	1 ml
689911	hINF- $\alpha$	sh	1 vial
690011	hINF- $\gamma$		1 vial
694331	mINF- $\gamma$	XMG 1.2	500 $\mu$ g

## Antibodies to Interleukins

Cat. No.	Specificity	Clone/Host	Quantity
693121	hIL-1 $\alpha$	rb	0.25 ml
693131	hIL-1 $\beta$	rb	0.25 ml
693181	hIL-2	gt	1 mg
694351	hIL-2 Receptor $\beta$ , p75	MAb	200 $\mu$ g
694341	mIL-2	S4B6	500 $\mu$ g
693191	hIL-4	sh	0.25 ml
694471	mIL-5	TRFK5	500 $\mu$ g
694481	mIL-5	TRFK4	500 $\mu$ g
693151	hIL-6	rb	0.25 ml
694441	mIL-6	MP5-32C11	500 $\mu$ g
693161	hIL-8	rb	0.25 ml

## Antibodies to Tumor Necrosis Factor

59714	hTNF- $\alpha$	63.29	1 ml
694521	hTNF- $\alpha$	rb	1 mg
694511	hTNF- $\alpha$	B-C7	200 $\mu$ g
694491	mTNF- $\alpha$	MPG-XT3	500 $\mu$ g

## Antibodies for Cancer Research

ICN offers numerous antibodies for the identification and characterization of all types of carcinomas and related tumor processes. They can be used in a variety of techniques including immunohistochemistry, immunoblotting, immunofluorescence, PAP, sandwich immunoassay and immunostaining.

### Antibodies to Tumor Associated Antigens

<b>CA 125</b>			
<b>MONOCLONAL ANTIBODY</b> (Ovarian Tumor Marker Antibody)			
<b>Anti-Human</b>			
<b>Clone:</b> CA 12-5			
<b>Isotype:</b> IgG <sub>1</sub>			
<b>Conc/Titer:</b> 1.0 mg/ml			
Applications: labeling; immunoassay.			
Demonstrates no cross-reactivity with human AFP, CEA, PAP, PSA, CA 19-9, or CA 15-3.			
692481			100 $\mu$ g
692482			500 $\mu$ g
<b>CA 15-3</b>			
<b>MONOCLONAL ANTIBODY</b> (Breast Tumor Marker Antibody)			
<b>Anti-Human</b>			
<b>Clone:</b> CA 15-3			
<b>Isotype:</b> IgG <sub>1</sub>			
<b>Conc/Titer:</b> 1.0 mg/ml			
Applications: labeling; immunoassay.			
This antibody demonstrates no cross-reactivity with human AFP, CEA, PAP, PSA, CA 19-9, or CA 12-5.			
692491			100 $\mu$ g
692492			500 $\mu$ g
<b>CA 19-9</b>			
692501			100 $\mu$ g
0-5°C	<b>MONOCLONAL ANTIBODY</b> (GI-Pancreatic Tumor Marker Antibody)		
<b>Anti-Human</b>			
<b>Clone:</b> CA 19-9			
<b>Isotype:</b> IgG <sub>1</sub>			
<b>Conc/Titer:</b> 1.04 mg/ml			
Applications: sandwich immunoassay; labeling.			
This antibody demonstrates no cross-reactivity with human AFP, CEA, PAP, PSA, CA 12-5, and CA 153.			

CATALOG NUMBER

692051	<b>CARCINOEMBRYONIC ANTIGEN</b>	0.5 mg
-20°C	<b>MONOCLONAL ANTIBODY</b> (CEA)	
<b>Anti-Human</b>		
<b>Clone:</b> CEA 1		
<b>Isotype:</b> mouse IgG <sub>1</sub> presented as purified ascites fluid		
Applications: Immunohistology and ELISA		
<hr/>		
691861	<b>CARCINOEMBRYONIC ANTIGEN</b>	1 ml
-20°C	<b>MONOCLONAL ANTIBODY</b> (Anti-CEA)	
<b>Anti-Human</b>		
<b>Clone:</b> PARLAM 4		
<b>Isotype:</b> mouse IgG <sub>1</sub>		
<b>Conc/Titer:</b> 1:5-1:10		
<b>Applications:</b> Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen and formalin-fixed paraffin-embedded tissue sections.		
This antibody reacts specifically in immunoblotting with a single band of 180 kDa human CEA. It does not react with biliary glycoprotein (BGP) nor non-specific cross-reacting antigen 1/11 (NCA). CEA may be found in normal epithelia and in other tissue of non-neoplastic diseases, but generally associated with a large variety of carcinomas with oncofetal characteristics.		
<b>Ref.:</b> Verstijnen, C.P.H.J., et al., <i>Anti-Cancer Research</i> , <b>6</b> , 97-104 (1986).		
<hr/>		
695421	<b>DESMOPLAKIN I/II</b>	50 $\mu$ g
-20°C	<b>MONOCLONAL ANTIBODY</b>	
<b>Anti-Bovine</b>		
<b>Clone:</b> Dp 2.15		
<b>Isotype:</b> mouse IgG <sub>1</sub>		
<b>Conc/titer:</b> 1:10		
<b>Applications:</b> Indirect Immunofluorescence		
The antibody stains desmosomes and is an excellent histological marker for epithelial tissues and epithelium-derived tumors including all primary and metastatic carcinomas. In combination with cytokeratin antibodies, they may aid in the identification of epithelial origin tumors and metastases. It has been shown to hold value in meningioma identification, and it displays broad species reactivity with human, cow, rat, mouse, and chicken cells and tissue.		
<hr/>		
10705	<b>ENDOTHELIAL MARKER (Veins)</b>	1 ml
0-5°C	<b>MONOCLONAL ANTIBODY</b>	
<b>Anti-Human</b>		
<b>Clone:</b> PAL-E		
<b>Isotype:</b> mouse IgG <sub>2a</sub>		
<b>Conc/Titer:</b> 1:5-1:20		
<b>Applications:</b> Immunoblotting; Immunostaining of cell suspensions and acetone-fixed frozen tissue sections.		
The antibody was prepared from human melanoma cells which react specifically to endothelial cells of capillaries, small and medium sized veins in cell culture and tissue sections. The antibody does not react with lymphatic endothelium. It cross-reacts with endothelial cells in goat, rabbit and pig. It is supplied as clarified tissue culture supernatant with 1% BSA and 0.09% sodium azide.		
<b>Ref.:</b> Schlingemann, R.O., et al., <i>Lab. Invest.</i> , <b>52</b> , 71-76 (1985).		

# Immunobiologicals

CATALOG  
NUMBER

647361 **EPITHELIAL MEMBRANE ANTIGEN** 1 ml  
0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Human EMA**  
**Host:** sheep  
**Form:** liquid antiserum  
**Conc/Titer:** 1:50-1:100  
Applications: PAP; Tissue sections  
The epithelial membrane antigen may be identical to milk fat globule. The antibody is monospecific in PAP or ABC peroxidase assays on routine formalin fixed, paraffin embedded human tissue.

10824 **EPITHELIAL SIALOMUCIN** 1 ml  
0-5°C **MONOCLONAL ANTIBODY**  
(Anti-ESM)  
**Anti-Human**  
**Clone:** ESM 140 Cl  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, acetone-fixed frozen tissue sections, and formalin-fixed, paraffin-embedded sections.  
The antibody was prepared from primary breast cancer cells and reacts with epithelial sialo-mucin, a >400 kDa mucus glycoprotein (MAM-6) located primarily in the glycocalyx of most glandular epithelial cells and in carcinoma cells. The antibody does not react with normal colon or rectal epithelium. It is supplied as clarified ascites with 1% BSA and 0.09% sodium azide.  
**Ref.:** Hageman, et al., "Application of monoclonal antibodies in tumour pathology", D.Ruiter, G.J. Fleuren, and S.O. Warner (ed.), Martinus Nijhoff, 167-190 (1987).

647341 **α-FETOPROTEIN** 1 ml  
0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** sheep  
**Form:** liquid  
**Conc/Titer:** 1:50-1:100  
Applications: Tissue sections  
**Cytology Grade**  
This antibody was produced by inoculating sheep with purified human material isolated by affinity chromatography from the plasma of a patient with hepatoma. The antiserum was insolubly adsorbed against glutaraldehyde polymers of human serum and tissues. An IgG enriched fraction was prepared from the adsorbed serum.

692031 **α-FETOPROTEIN** 0.5 mg  
-20°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** AF2  
**Isotype/Form:** mouse IgG, purified liquid

CATALOG  
NUMBER

**α<sub>1</sub>-FETOPROTEIN**  
**POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** sheep  
**Form:** liquid  
**Conc/Titer:** ≥100 KIU  
Applications: Immunoprecipitin  
**Nephelometric Grade**  
682141 2 ml  
682142 5 ml

688031 **α-FETOPROTEIN** 0.5 ml  
-20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** undiluted liquid antiserum  
**Conc/Titer:** 1:10  
Applications: Immunohistology  
This antibody is reactive on routine formalin-fixed, paraffin-embedded tissues.

55112 **α<sub>1</sub>-FETOPROTEIN** 2 ml  
0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** lyophilized  
**Applications:** ELISA; Immunoblotting; Immunostaining.

10829 **LUNG CANCER MARKER** 1 ml  
0-5°C **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** MOC-1  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cytological specimens and frozen sections fixed by Nakane procedure and microwaved, formalin-fixed, paraffin-embedded tissue sections (cat. no.'s 10829 and 10831). The antibody is reactive with neural, endocrine tissues, and in the lung preferentially with small cell lung cancers and carcinoids.  
**Ref.:** 1. Berendsen, H.H., et al., J. Clin. Pathol., **14**, 273-276 (1988).  
2. Ruitenbeek, T., et al., Arch. Pathol. Lab. Med., **118**, 265-269 (1994).

CATALOG  
NUMBER

**10830**  
0-5°C  
**LUNG CANCER MARKER** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** MOC-21  
**Isotype:** mouse IgG<sub>2a</sub>  
**Applications:** Immunoblotting; Immunostaining of cytological specimens and frozen sections fixed by Nakane procedure and microwaved, formalin-fixed, paraffin-embedded tissue sections (cat. no.'s 10829 and 10831). The antibody is reactive with neural, endocrine tissues, and in the lung preferentially with small cell lung cancers and carcinoids.  
**Ref.:** 1. Berendsen, H.H., et al., *J. Clin. Pathol.*, **14**, 273-276 (1988).  
2. Ruitenbeek, T., et al., *Arch. Pathol. Lab. Med.*, **118**, 265-269 (1994).

**10831**  
0-5°C  
**LUNG CANCER MARKER** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** MOC-31  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cytological specimens and frozen sections fixed by Nakane procedure and microwaved, formalin-fixed, paraffin-embedded tissue sections (cat. no.'s 10829 and 10831). The antibody is reactive with all lung carcinomas and most epithelia. It is unreactive with normal and malignant mesothelia. Therefore, it is especially useful for the detection of carcinoma cells in ascites or pleural effusions.  
**Ref.:** 1. Berendsen, H.H., et al., *J. Clin. Pathol.*, **14**, 273-276 (1988).  
2. Ruitenbeek, T., et al., *Arch. Pathol. Lab. Med.*, **118**, 265-269 (1994).

**10832**  
0-5°C  
**LUNG CANCER MARKER** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** MOC-32  
**Isotype:** mouse IgM  
**Applications:** Immunoblotting; Immunostaining of cytological specimens and frozen sections fixed by Nakane procedure and microwaved, formalin-fixed, paraffin-embedded tissue sections (cat. no.'s 10829 and 10831). The antibody is reactive with neural, endocrine tissues, and in the lung preferentially with small cell lung cancers and carcinoids.  
**Ref.:** 1. Berendsen, H.H., et al., *J. Clin. Pathol.*, **14**, 273-276 (1988).  
2. Ruitenbeek, T., et al., *Arch. Pathol. Lab. Med.*, **118**, 265-269 (1994).

CATALOG  
NUMBER

**10833**  
0-5°C  
**LUNG CANCER MARKER** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** MOC-52  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cytological specimens and frozen sections fixed by Nakane procedure and microwaved, formalin-fixed, paraffin-embedded tissue sections (cat. no.'s 10829 and 10831). The antibody is reactive with neural, endocrine tissues, and in the lung preferentially with small cell lung cancers and carcinoids.  
**Ref.:** 1. Berendsen, H.H., et al., *J. Clin. Pathol.*, **14**, 273-276 (1988).  
2. Ruitenbeek, T., et al., *Arch. Pathol. Lab. Med.*, **118**, 265-269 (1994).

**11419**  
0-5°C  
**LUNG CANCER MARKER PANEL** 5x0.2 ml  
**MONOCLONAL ANTIBODY**  
Contains 0.2 ml each of MOC-1, MOC-21, MOC-31, MOC-32, and MOC-52.

**692511**  
-20°C  
**MUCIN 2** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** CCP58  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:10-1:40  
**Applications:** immunohistology; frozen and paraffin-embedded sections  
This antibody reacts with mucin from small and large intestines and to a weaker extent salivary and breast epithelia. Other epithelia, such as stomach, pancreas, kidney and ovary are not reactive. Tumor tissues derived from the intestines are positive with this antibody. Additionally, gastric cancer tissue appears positive, whereas normal stomach epithelia is negative. This antibody is reactive with the colon cancer cell line LS 174 T.

**691881**  
-20°C  
**PROSTATE SPECIFIC ANTIGEN** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** ER-PR 8  
**Isotype:** mouse IgG<sub>1</sub> presented as ascites fluid  
**Conc/Titer:** 1:10-1:20  
**Applications:** Immunoblotting; Immunohistochemistry  
The original immunogen was from human prostate. The antibody reacts with a 34 kDa protein. Immunohistochemical studies have shown that the presence of PSA is highly specific for the demonstration of the prostatic origin of a malignancy. Antibodies to PSA have been shown to be valuable reagents for the positive identification of primary and metastatic prostatic carcinoma. This antibody reacts with both frozen and formalin-fixed paraffin embedded tissues.

## Lymphoma Identification Products

The usefulness of monoclonal antibodies in the identification of T and B cell surface antigens has been limited because of their inability to detect those antigens in formalin-fixed, paraffin-embedded tissues. A panel of three antibodies, LN-1, LN-2, LN-3, were developed to react with B cells in B<sub>5</sub>-fixed paraffin-embedded sections<sup>1,2</sup> as well as frozen sections. LN-1 reacts with the surface membrane and cytoplasm of germinal B cells. LN-2 reacts uniquely with the nuclear membrane and cytoplasm of mantle zone and germinal center B cells and interdigitating histiocytes. LN-3 reacts with the HLA-DR antigen.

The use of these three antibodies as a panel has eliminated the need to perform lymphoma identification using frozen tissues or cell dispersions. Such preparations often destroy or distort the cell morphology which is key to the pathologist in making a descriptive diagnosis. When used as a panel, all three antibodies are useful for the phenotyping of malignant lymphomas by virtue of their ability to classify diffuse lymphoid proliferations as T or B cell origin, and establish architectural structure of the lymphoid proliferations.

These panels provide the ability to assess the immunologic phenotype of neoplastic lymphocytes in conjunction with the critical morphologic criteria requiring paraffin embedding. The three LN monoclonal antibodies are used with a murine monoclonal antibody control which is directed against an unrelated antigen and provides a means of assessing the non-specific binding of the primary antibodies. The lymphoma identification kit is used in coordination with the ImmuMark™ streptavidin-biotin peroxidase immunostaining method to form a complete staining kit. The primary LN antibodies and the streptavidin-biotin/peroxidase conjugate detection system are purposely matched for maximum antigen detection in key tissue samples with the absolute minimum background.

### References:

1. Epstein, A.L., et al., J. Immun., **133**, 1028 (1984).
2. Marder, R.J., et al., Lab. Invest. **52**, 497 (1985).

**689401** **LYMPHOMA IDENTIFICATION KIT, IMMUMARK™** 1 Kit  
**0-5°C** The kit contents include B-lymphocyte Monoclonal antibodies- clone numbers LN-1, LN-2, and LN-3, as well as, LN control. Also, supplied is the ImmuMark™ streptavidin-biotin peroxidase immunostaining system.

**693011** **B-LYMPHOCYTE SURFACE ANTIGEN** 4 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**(CDw75)**  
**Anti-Human**  
**Clone:** LN-1  
**Isotype:** mouse IgM  
**Conc/Titer:** 1:4  
**Applications:** Immunohistology  
 This antibody reacts with the surface membrane and cytoplasm of germinal B cells. See Lymphoma Identification Products in the Immunobiologicals section for details.

**693021** **B-LYMPHOCYTE SURFACE ANTIGEN** 4 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** LN-2  
**Isotype:** mouse IgM  
**Conc/Titer:** 1 mg/ml  
**Applications:** Immunohistology  
 This antibody reacts uniquely with the nuclear membrane and cytoplasm of mantle zone and germinal center B cells and interdigitating histiocytes. See Lymphoma Identification Products in the Immunobiologicals section for details.

CATALOG  
NUMBER

**693031** **B/T LYMPHOCYTE SURFACE ANTIGEN** 4 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**(CD74)**  
**Anti-Human**  
**Clone:** LN-3  
**Isotype:** mouse IgM  
**Conc/Titer:** 1 mg/ml  
**Applications:** Immunohistology  
 This antibody reacts with the HLA-DR surface antigen on B and T lymphocytes. See Lymphoma Identification Products in the Immunobiologicals section for details.

**693051** **MACROPHAGE** 4 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** LN-5  
**Isotype:** mouse IgM  
**Applications:** Immunohistology  
 This antibody is reactive in B<sub>5</sub> fixed, paraffin-embedded tissue sections to human macrophages and derived tumors. It stains the cytoplasm of macrophages after fixation and paraffin-embedding procedures but is not expressed in frozen sections like the LN-1, LN-2, and LN-3 clone antibodies.

**693001** **MYELOID CELLS** 4 ml  
**-20°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** BM-1  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunohistology  
 This antibody is reactive in B<sub>5</sub> fixed, paraffin-embedded tissue sections to human myeloid cells and derived malignancies. It reacts with a 183 kDa cytoplasmic antigen with DNA binding characteristics which is expressed in most myeloid precursor cells and myeloid leukemias.

**693061** **VIMENTIN** 4 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** LN-6  
**Isotype:** mouse IgM  
**Applications:** Immunohistology  
 This antibody reacts with B<sub>5</sub> fixed, paraffin-embedded tissue sections to human mesenchymal cells and derived sarcomas. The antibody recognizes an epitope of the cytoskeletal protein vimentin but unlike other anti-vimentin antibodies, it does not react with human lymphoid cells or derived malignancies.



## Antibodies for Tumor Identification

Cat. No.	Specificity	Clone/Host	Quantity
691391	Actin	HUC1-1	0.1 ml
685431	B Cells	FMC-7	0.5 ml
692491	Breast Tumor Marker	CA 15-3	100 µg
10704	E-Cadherin	6 F9	1 ml
10028	E-Cadherin	5 H9	1 ml
685861	CD5	UCHT-2	0.2 mg
685701	CD7	HuLy-m2	0.5 ml
690921	CD13 (Myeloid cells)	CLB302	1 ml
10905	CD43	MT-1	1 ml
10900	CD45R	MB-1	1 ml
685981	CD57	NK-1	0.1 mg
10800	CEA	PARLAM4	1 ml
11422	Chromogarnin A&B	rb	0.25 ml
685671	Collagen, Type IV	24.12.8	0.5 ml
631731	Collagen, Type IV	IV-4H12	100 µg
10760	Collagen, Type IV	rb	0.25 ml
10710	Collagen, Type IV	1042	1 ml
10915	CLA	BRA55	1 ml
10550	Cytokeratin, pan	rb	0.25 ml
10525	Cytokeratin 4	6B10	1 ml
10522	Cytokeratin 7	RCK 105	1 ml
10526	Cytokeratin 8	M20	1 ml
11414	Cytokeratin 10	DE-K10	1 ml
10523	Cytokeratin 13	1C7	1 ml
10524	Cytokeratin 13	2D7	1 ml
10003	Cytokeratin 14	RCK 107	1 ml
10500	Cytokeratin 18	RGE53	1 ml
11416	Cytokeratin 18	RCK 106	1 ml
11417	Cytokeratin 19	RCK 108	1 ml
10502	Cytokeratin 8,18,19	NCL 5D3	1 ml
10570	Desmin	rb	0.25 ml
10519	Desmin	D9	1 ml
695421	Desmoplakin I/II	Dp 2.15	50 µg
10705	Endothelial Marker	PAL-E	1 ml
647361	Epithelial Membrane Ant.	sh	1 ml
691401	Epithelial Keratin	AE1	200 µg
691421	Epithelial Keratin	AE3	200 µg
10824	Epithelial Sialomucin	ESM 140 Cl	1 ml
693201	Fibronectin, Cellular	DH 1	10 µg
693202			50 µg
691821	GFAP	8	1 ml
10505	GFAP	6F2	1 ml
10555	GFAP	rb	0.25 ml
691102	GFAP	GA5	1 ml
692501	GI-Pancreatic Tumor Mark.	CA 19-9	100 µg
681201	Keratin	rb	0.25 ml
10765	Laminin	rb	0.25 ml
696101	Laminin	LAM 1	0.2 ml
631691	Laminin	HL-4H3	100 µg
10829	Lung Cancer Marker	MOC-1	1 ml
10830	Lung Cancer Marker	MOC-21	1 ml
10831	Lung Cancer Marker	MOC-31	1 ml
10832	Lung Cancer Marker	MOC-32	1 ml
10833	Lung Cancer Marker	MOC-52	1 ml
10819	Melanoma Associated Ant.	NK1/C3	1 ml
10822	Melanoma Associated Ant.	PAL-M1	1 ml
692511	Mucin 2	CCP58	1 ml
693001	Myeloid Cells	BM-1	4 ml
688091	Neuron Specific Enolase	rb	0.2 ml
10825	Ovarian Tumor Marker	OV-632	1 ml
692481	Ovarian Tumor Marker	CA 125	100 µg

Cat. No.	Specificity	Clone/Host	Quantity
10815	Prostate Specific Antigen	ER-PR 8	1 ml
688111	Prostate Spec. Acid Phos.	rb	0.5 ml
653042	Prostatic Acid Phos.	rb	0.5 ml
10816	Prostatic Spec. Acid. Phos.	Pase/4LJ	1 ml
11420	S100	rb	0.25 ml
681211	Vimentin	rb	0.25 ml

CATALOG  
NUMBER

## Antibodies for Molecular Biology

Antibodies for use in molecular biology applications play an integral role in the identification of fusion proteins and for the detection and isolation of DNA/RNA probes. ICN offers numerous antibodies for use in molecular biology including antibodies to bromodeoxyuridine for detecting the S phase in cells, HCV and HIV viral protein antibodies for various applications and antibodies to dinitrophenol. Typical applications include ELISA, immunoblotting, immunohistochemistry and immunofluorescence.

### Antibodies to Bromodeoxyuridine

In immunoassays, Bromodeoxyuridine (BrdUrd) antibodies react strongly with free or carrier-protein conjugated BrdUrd, but not with any other nucleotide. By immunocytochemistry, they recognize BrdUrd in denatured (single stranded) DNA only. These antibodies may be used for the following.

- Radioimmunochemical determination of circulating BrdUrd levels after parenteral administration.*
- Detection of S phase cells in tissue sections by immunoperoxidase or immunofluorescence methods or in doubleimmunocytochemical staining techniques.*
- Detection of S phase cells in cell suspensions by immunofluorescence microscopy.*
- Percentage determination of proliferating cells by flow cytometry methods.*
- Quantitative evaluation of the number of cells in the various phases of the cell cycle by dual parameter flow cytometry analysis.*

#### References:

1. Schutte, B., et al., J. Histochem. Cytochem., **35**, 371 (1987).
2. Schutte, B., et al., J. Histochem. Cytochem., **35**, 1343 (1987).

11200  
0-5°C **BROMODEOXYURIDINE** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-BrdU**  
**Clone:** II B5  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:50-1:20  
**Applications:** Immunostaining of cell suspensions, acetone-fixed frozen sections, and formalin-fixed paraffin-embedded tissue sections.  
This antibody is produced by immunization of bromodeoxyuridine conjugated to BSA. It reacts strongly with free or carrier-protein conjugated BrdU but not with any other nucleoside (although it is 100% cross-reactive with iododeoxyuridine).

## Antibodies to Dinitrophenol

**DINITROPHENOL**  
**MONOCLONAL ANTIBODY**  
**Anti-DNP**  
**Clone:** SPE 7  
**Isotype:** affinity purified mouse IgE  
**Conc/Titer:** 1:10<sup>6</sup>  
**Applications:** Immunodiffusion techniques; Immunoprecipitation  
There is a slight amount of IgG Anti-DNP present. In passive cutaneous anaphylaxis tests in rats, the antibody demonstrates a 1:10<sup>6</sup> titer. It will not react with BSA.

630122 0.25 mg  
630121 0.50 mg

NEW  
630132  
-20°C **DINITROPHENOL** 200 µg  
**MONOCLONAL ANTIBODY**  
**Anti-DNP**  
**Isotype:** purified rat IgE  
**Applications:** Immunodiffusion techniques.

CATALOG  
NUMBER

610071  
-20°C **DINITROPHENOL** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-DNP-BSA Complex**  
**Host:** goat  
**Form:** purified liquid antiserum  
**Conc/Titer:** 1.0 mg/ml  
**Applications:** Immunodiffusion techniques; Immunoprecipitation  
Immune response was raised by immunization with DNP-bovine albumin complex.

610061  
-20°C **DINITROPHENOL** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-DNP-BSA Complex**  
**Host:** rabbit  
**Form:** purified liquid antiserum  
**Conc/Titer:** 1.0 mg/ml  
**Applications:** Immunodiffusion techniques; Immunoprecipitation  
Immune response was raised by immunization with DNP-bovine albumin complex.

## Nuclear Protein and Other Antibodies

613851  
0-5°C **3',5'-cyclic-ADENOSINE MONOPHOSPHATE-BSA** 100 T  
**POLYCLONAL ANTIBODY**  
**(3',5'-cyclic-AMP-BSA)**  
**Anti-Human**  
**Host:** rabbit  
**Applications:** RIA

613861  
0-5°C **cyclic-ADENOSINE MONOPHOSPHATE-KLH** 100 T  
**POLYCLONAL ANTIBODY**  
**Anti-cyclic-AMP**  
**Host:** rabbit  
**Form:** purified antiserum  
**Applications:** Immunohistology

57028  
0-5°C **AUTOIMMUNE ANTIGEN<sup>3</sup>mG CAP** 1 ml  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** H20  
**Isotype:** mouse IgG<sub>1</sub>  
**Conc/Titer:** 1:5-1:10  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the G polypeptide of the 5'-end of U snRNA (small nuclear RNA's).

57029  
0-5°C **AUTOIMMUNE ANTIGEN** 1 ml  
**Sm PROTEINS BB'**  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** ANA125  
**Isotype:** mouse IgG<sub>2a</sub>  
**Conc/Titer:** 1:5-1:10  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the BB' doublet core protein of snRNP (ribonucleoprotein particles).

CATALOG  
NUMBER

57030 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**Sm PROTEIN D1**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: ANA127  
Isotype: mouse IgA  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the D1 core protein fragment of snRNP (ribonucleoprotein particles).

57031 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**Sm PROTEIN BB' and D1**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: ANA126  
Isotype: mouse IgA  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against both the BB' and D1 core protein portions of snRNP (ribonucleoprotein particles).

57032 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**Sm PROTEIN BB' and D1**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: ANA128  
Isotype: mouse IgG<sub>2b</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against both the BB' and D1 core protein portions of snRNP (ribonucleoprotein particles).

57033 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**U1-70K PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: H111  
Isotype: mouse IgG<sub>2a</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the U1 70 kDa polypeptide of U1 snRNP protein.

57034 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**U1A PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: H304  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the U1 32 kDa polypeptide of U1 snRNP protein.

57035 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**U1A and U2B'' PROTEINS**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 9A9  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against both the U1 32 kDa polypeptide of the U1 snRNP protein and the U2B'' 27 kDa polypeptide of the U2 snRNP protein.

CATALOG  
NUMBER

57036 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**U2B'' PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 4G3  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the U2B'' 27 kDa polypeptide of the U2 snRNP protein.

57037 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**La (SS-B) PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 4B6  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the 47 kDa La RNP phosphoprotein.

57038 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**Ro52 (SS-A) PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 4C6  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the Ro52 core polypeptide of Ro RNP, a small Y-RNA localized in the cytoplasm.

57039 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**Ro60 (SS-A) PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 1D8  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the Ro60 core polypeptide of Ro RNP, a small Y-RNA localized in the cytoplasm.

57040 AUTOIMMUNE ANTIGEN 1 ml  
0-5°C  
**Ro60 (SS-A) PROTEIN**  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: 2G10  
Isotype: mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunofluorescence.  
This antibody is directed against the Ro60 core polypeptide of Ro RNP, a small Y-RNA localized in the cytoplasm.

# Immunobiologicals

CATALOG NUMBER

**630151** **DIGOXIN** 0.1 ml  
**-20°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** DI-22  
**Isotype/Form:** IgG<sub>1</sub> processed from mouse ascites fluid from BALB/c mice.  
**Conc/Titer:** 1:50,000  
**Applications:** RIA  
 The immunogen used was a digoxin-keyhole limpet hemocyanin conjugate. It reacts specifically with digoxin with no cross reaction detected. The sensitivity is at least 0.3 ng/ml digoxin in serum. The titer is such that 0.1 ml of the recommended dilution will bind approximately 50% of 3 pg <sup>125</sup>I digoxin in a RIA using charcoal as the separation method.

**55976** **β-GALACTOSIDASE** 2 ml  
**0-5°C** **POLYCLONAL ANTIBODY**  
**Host:** rabbit  
**Form:** liquid (IgG)  
**Applications:** Immunoblotting; Immunostaining of acetone-fixed frozen and formalin-fixed, paraffin-embedded tissue sections.  
 This rabbit antiserum is purified by protein A chromatography. It is repeatedly absorbed with immobilized lysate from a β-gal (*Escherichia coli* strain). It shows minimum cross-reactivity to *E. coli* proteins in immunoblotting. It is also available as an affinity gel.

**633631** **β-GALACTOSIDASE** 0.5 ml  
**-20°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** GAL-13  
**Applications:** Neutralizing Studies; Immunohistology.

**57041** **HISTIDINE RESIDUES** 1 ml  
**0-5°C** **POLYCLONAL ANTIBODY**  
**Anti-Histidine Residues**  
**Host:** rabbit  
**Form:** lyophilized  
**Applications:** Immunoblotting; Immunoprecipitation and immunoaffinity chromatography of His-tagged proteins.  
 This antiserum reacts to histidine residues (hexamer) for detection and purification of recombinant DNA proteins which are extended with a number of histidine (His) residues. It is supplied lyophilized product of purified rabbit (IgG) with 1% BSA and 0.09% sodium azide.

**693311** **HISTONE H1** 2 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**Anti-H1**  
**Applications:** Immunohistology  
 Recognizes the histone H1 in the nucleus of animal and plant cells.

**692461** **p53 ONCOPROTEIN** 0.25 ml  
**0-5°C** **POLYCLONAL ANTIBODY**  
**Anti-Human p53**  
**Host:** rabbit  
**Form:** purified antiserum  
**Conc/Titer:** 1:50-1:100  
**Applications:** immunoprecipitin; immunohistology; frozen and paraffin-embedded sections  
 This antibody reacts with wild type and most mutant forms of p53.

CATALOG NUMBER

**11435** **p53 PROTEIN** 0.25 ml  
**0-5°C** **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Form:** liquid  
**Conc/Titer:** 1:50-1:100  
**Applications:** Immunoblotting; Immunostaining of acetone-fixed frozen and formalin-fixed, paraffin-embedded tissue sections.  
 The original antigen was recombinant p53 oncoprotein. The antibody recognizes wild-type and most mutant forms of p53 in immunohistochemistry. For formalin fixation, small tissue blocks should be fixed within 4 hours in buffered formaldehyde. It is supplied with 1% BSA and 0.09% sodium azide.  
**Ref.:** 1. Bartek, J., et al., *Oncogene*, **5**, 893-899 (1990).  
 2. Hall, P.A., et al., *Lancet*, **338**, 513 (1991).

**693071** **p105 NUCLEAR ANTIGEN** 4 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 780-3  
**Isotype:** mouse IgM  
**Conc/Titer:** 1 mg/ml  
**Applications:** Immunohistochemistry  
 The antibody was produced by the fusion of mouse myeloma NSI cells with BALB/c splenocytes immunized with nuclei from PWM-stimulated human peripheral blood lymphocytes. This antibody has been used for two-parameter flow cytometric analysis of nuclear antigen expression, allowing both quantitation of the nuclear antigen and cellular DNA. It has potential prognostic value, allowing for both prospective and retrospective studies.

**11434** **PROLIFERATING CELL NUCLEAR ANTIGEN** 1 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**(Anti-PCNA; Anti-cyclin)**  
**Anti-Rat**  
**Clone:** PC 10  
**Isotype:** mouse IgG<sub>2a</sub>  
**Conc/Titer:** 1:5-1:20  
**Applications:** Immunoblotting; Immunostaining of formalin-fixed, paraffin-embedded frozen tissue sections.  
 The antibody was produced using recombinant rat PCNA antigen. It reacts with 36 kDa cyclin in immunoblotting and in immunohistochemistry. Reactivity can be lost after too long fixation times (>24 hours) or too high temperatures (>55°). PCNA is an excellent marker of proliferating cells in routinely processed tissue sections. This antibody cross-reacts with PCNA of all vertebrates. No reactivity is observed on frozen sections. It is supplied as clarified tissue culture supernatant with 1% BSA and 0.09% sodium azide.

**59273** **PROSOMES p21K** 0.5 ml  
**0-5°C** **MONOCLONAL ANTIBODY**  
**Anti-Duck**  
**Clone:** AD4  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, frozen sections, and formalin-fixed, paraffin-embedded sections.  
 The antibody cross-reacts to human (p33K/p70K), mouse (p33K), kangaroo-rat (p33K/p70K), duck (p21K/p33K/p70K) and chicken (p33K). It is supplied as clarified ascites with 0.02% sodium azide.  
**Ref.:** 1. Zwickl, P. et al., *Biochemistry*, **31**, 964-971 (1992).  
 2. Schmid, H.P., et al., *Embo Journal*, **3**, 29-34 (1984).  
 3. Scherrer, K., *Molecular Biology Reports*, **14**, 1-9 (1990).

CATALOG  
NUMBER

**59274** **PROSOMES p27K** 0.5 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
**Anti-Duck**  
**Clone:** IB5  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, frozen sections, and foramin-fixed, paraffin-embedded sections.  
The antibody cross-reacts to human (p27K/p38K), monkey, mouse, kangaroo rat, chicken, drosophila (p29K), pleurodeles, axolotl, sea urchin, plants (p75K). It is supplied as clarified ascites with 0.02% sodium azide.  
**Ref.:** 1. Zwickl, P. et al., *Biochemistry*, **31**, 964-971 (1992).  
2. Schmid, H.P., et al., *Embo Journal*, **3**, 29-34 (1984).  
3. Scherrer, K., *Molecular Biology Reports*, **14**, 1-9 (1990).

**59275** **PROSOMES p29K** 0.5 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
**Anti-Duck**  
**Clone:** GD6  
**Isotype:** mouse IgG<sub>2b</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, frozen sections, and foramin-fixed, paraffin-embedded sections.  
The antibody cross-reacts to human, kangaroo-rat, monkey, chicken, and pleurodeles. It shows poor reaction to mammalian antigens in immunoblotting. It is supplied as clarified ascites with 0.02% sodium azide.  
**Ref.:** 1. Zwickl, P. et al., *Biochemistry*, **31**, 964-971 (1992).  
2. Schmid, H.P., et al., *Embo Journal*, **3**, 29-34 (1984).  
3. Scherrer, K., *Molecular Biology Reports*, **14**, 1-9 (1990).

**59276** **PROSOMES p31K** 0.5 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
**Anti-Duck**  
**Clone:** AA4  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, frozen sections, and foramin-fixed, paraffin-embedded sections.  
The antibody cross-reacts to human, monkey, mouse, kangaroo rat, chicken, pleurodeles, and axolotyl. It is supplied as clarified ascites with 0.02% sodium azide.  
**Ref.:** 1. Zwickl, P. et al., *Biochemistry*, **31**, 964-971 (1992).  
2. Schmid, H.P., et al., *Embo Journal*, **3**, 29-34 (1984).  
3. Scherrer, K., *Molecular Biology Reports*, **14**, 1-9 (1990).

**59277** **PROSOMES p25K** 0.5 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 7A11  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, frozen sections, and foramin-fixed, paraffin-embedded sections.  
The antibody cross-reacts to kangaroo rat and monkey. It is supplied as clarified ascites with 0.02% sodium azide.  
**Ref.:** 1. Zwickl, P. et al., *Biochemistry*, **31**, 964-971 (1992).  
2. Schmid, H.P., et al., *Embo Journal*, **3**, 29-34 (1984).  
3. Scherrer, K., *Molecular Biology Reports*, **14**, 1-9 (1990).

CATALOG  
NUMBER

**59278** **PROSOMES p30K/p33K** 0.5 ml  
0-5°C  
**MONOCLONAL ANTIBODY**  
**Anti-Human**  
**Clone:** 62A32  
**Isotype:** mouse IgG<sub>1</sub>  
**Applications:** Immunoblotting; Immunostaining of cell suspensions, frozen sections, and foramin-fixed, paraffin-embedded sections.  
The antibody cross-reacts to kangaroo rat and monkey. It is supplied as clarified ascites with 0.02% sodium azide.  
**Ref.:** 1. Zwickl, P. et al., *Biochemistry*, **31**, 964-971 (1992).  
2. Schmid, H.P., et al., *Embo Journal*, **3**, 29-34 (1984).  
3. Scherrer, K., *Molecular Biology Reports*, **14**, 1-9 (1990).

## Antibodies to Viral Protein Antigens

Cat. No.	Specificity	Clone/Host	Quantity	Price
659491	HCMV gB	1-M-12	100 µg	236.25
659511	HCMV IE pp <sup>72</sup>	1-K-10	100 µg	236.25
659501	HCMV pp <sup>65</sup>	1-I-11	100 µg	236.25
659551	HCV Core Antigen	1F6	100 µg	236.25
659561	HCV Core Antigen	1E5	100 µg	236.25
659541	HCV NS Antigen	1G7	100 µg	236.25
659641	HIV-1 p17	1C3	100 µg	Enquire
659611	HIV-1 p24	1A1	100 µg	Enquire
56979	HIV-1 p24 (142-207)	OT34A	100 µg	135.00
56980	HIV-1 p24 (214-226)	OT39B	100 µg	135.00
56977	HIV-1 p31	OT10	100 µg	135.00
56978	HIV-1 p55	OT11	100 µg	135.00
659631	HIV-1 p55/p17	1B2	100 µg	236.25
659621	HIV-1 gp41	1D4	100 µg	236.25
694021	HIV-1 gp120	1C1	50 µg	385.85
56971	HIV-1 gp160	OT 104A	100 µg	135.00
694031	HIV-1 REV	rb	100 µg	110.25
694032	HIV-1 REV	rb	250 µg	275.60
56975	HIV-1 RT (387-412)	OT9	100 µg	135.00
659531	HSV(1) gD Antigen	1-I-9	100 µg	236.25
659521	HSV(1) gB Antigen	1-G-10	100 µg	236.25

## Antibodies to Bioactive Peptides and Hormones

Cat. No.	Specificity	Clone/Host	Quantity	Price
647011	ACTH 1-24	rb	0.25 ml	120.60
613771	Angiotensin I-BSA, RIA	rb	100 T	72.85
658701	Angiotensin I-BSA, RIA	rb	1 ml	449.15
688041	Bombesin, Hist.	rb	0.2 ml	198.95
647021	Bombesin-KLH	rb	0.25 ml	114.85
688051	Calcitonin, Hist.	rb	0.25 ml	113.50
647031	Calcitonin-KLH	rb	0.25 ml	114.85
11189	CGRP	rb	0.25 ml	185.00
647041	β-Endorphin-KLH	rb	0.25 ml	120.60
11429	β-Endorphin	rb	0.25 ml	181.90
11183	Gastrin	rb	0.25 ml	168.00
11425	Histamine	rb	0.25 ml	181.90
691191	Luteinizing Hormone	3LH5B6YH4	0.25 ml	258.00
11175	LH-RH	rb	0.25 ml	179.00
614971	Morphine-KLH, RIA	rb	1 ml	229.35
647111	Pancreatic Polypeptide	rb	0.25 ml	114.85
688101	Pancreatic Polypeptide	rb	0.5 ml	198.95
647141	Somatostatin-KLH	rb	0.25 ml	114.85
11180	Somatostatin	rb	0.25 ml	250.00
11192	Substance P	rb	0.25 ml	165.00
647151	Substance P-KLH	rb	0.25 ml	114.85
11170	Thyrotropin Rel. Hormone	rb	0.25 ml	185.00
11428	VIP	rb	0.25 ml	181.90
647201	VIP-KLH	rb	0.25 ml	114.85
647171	Vasopressin-KLH	rb	0.25 ml	114.85

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### Human Protein Antibodies

Cat. No.	Specificity	Clone/Host	Quantity
692011	$\alpha_1$ - Acid Glycoprotein	AAG2	0.5 mg
610151	Albumin	gt	2 ml
650511	Albumin	rb	2 ml
682901	Albumin, FITC	sh	2 ml
613511	Aldosterone-3-BSA, RIA	rb	100 T
613201	Androstenedione 19-CME	rb	100 T
647351	$\alpha_1$ -Antichymotrypsin, Cyt.	sh	1 ml
659001	$\alpha_2$ -Antiplasmin	rb	1 ml
659011	Antithrombin III	rb	1 ml
692021	$\alpha_1$ -Antitrypsin	AAT3	0.5 mg
682021	$\alpha_1$ -Antitrypsin, Neph.	sh	2 ml
682022			5 ml
650851	C1 Esterase Inhibitor	gt	2 ml
680011	C1q	sh	2 ml
682151	C1q	sh	2 ml
682152			5 ml
680122	C1r	gt	1 ml
680022	C1s	gt	1 ml
680032	C2	rb	1 ml
682921	C3, FITC	sh	2 ml
680041	C3	gt	2 ml
682031	C3, Neph.	sh	2 ml
682032			5 ml
680201	C3b Inactivator	gt	2 ml
680221	C3b Proactivator	gt	2 ml
601681	C3c	sh	1 ml
682541	C3c, FITC	sh	2 ml
680051	C4	sh	2 ml
682051	C4	sh	2 ml
682052			5 ml
682931	C4, FITC	sh	2 ml
659021	C4b Binding Protein	rb	1 ml
680061	C5	gt	1 ml
680072	C6	gt	1 ml
680082	C7	gt	1 ml
680092	C8	gt	1 ml
680101	C9	gt	1 ml
647311	Cathepsin B, Cyt.	sh	1 ml
647321	Cathepsin G, Cyt.	sh	1 ml
650731	hCG, $\alpha$ & $\beta$	rb	1 ml
691031	hCG, $\alpha$ -chain	210	0.2 ml
691041	hCG, $\beta$ -chain	602	1 ml
631041	hCG, $\beta$ -chain	PE-4	0.1 ml
11422	Chromogranin A & B	rb	0.25 ml
613621	Corticosterone-3-CMO	rb	100 T
613601	Cortisol-21-thyroglobulin	rb	100 T
682561	C Reactive Protein	sh	2 ml
682562			5 ml
682061	C Reactive Protein, Neph.	sh	2 ml
682062			5 ml
613401	5 $\alpha$ -Dihydrotestosterone-15-CEMC-BSA	rb	100 T
647301	Elastase, Cyt.	sh	1 ml
631821	Elastase, Neutrophil	I21-3E10	100 $\mu$ g
631822			250 $\mu$ g
631823			500 $\mu$ g
685681	Epithelial/Endothelial Cells	18.29	0.5 ml
614051	17 $\beta$ -Estradiol-6-BSA	rb	1 ml
613051	6-keto-Estradiol-17 $\beta$ -estradiol-6-oxime-BSA	rb	100 T
613351	Estrone-3-CME-BSA	rb	100 T
659031	Factor II	rb	1 ml

Cat. No.	Specificity	Clone/Host	Quantity
659041	Factor V	rb	1 ml
659101	Factor VIII-A	rb	1 ml
685651	Factor VIII	24-2-C7	0.5 ml
681121	Factor VIII	gt	1 ml
685661	Factor VIII Related Ant.	21-43	0.5 ml
659061	Factor IX	rb	1 ml
692061	Ferritin	gt	2 ml
682191	Ferritin	FE1	0.5 mg
650771	Ferritin	rb	1 ml
610141	Fibrinogen	gt	2 ml
659121	Fibrinogen	rb	1 ml
682941	Fibrinogen, FITC	sh	2 ml
640911	Fibrinogen Deg. Prod. D	gt	2 ml
659081	Fibrinogen Deg. Prod. D	rb	1 ml
640921	Fibrinogen Deg. Prod. E	gt	2 ml
659131	Fibrinopeptide A	rb	1 ml
11185	FSH	1038	1 ml
613761	hGH, RIA	rb	100 T
692081	hGH	GH2	0.5 mg
11181	hGH	rb	0.25 ml
680321	$\beta_1$ -H	gt	2 ml
610311	Haptoglobin	gt	2 ml
613461	17 $\alpha$ -Hydroxyprogesterone-3-oxime-BSA, RIA	rb	100 T
681061	Kininogen	gt	1 ml
670581	Lactoferrin	rb	2 mg
675581	Lactoferrin, AP	rb	1 ml
673581	Lactoferrin, Biotin	rb	1.5 ml
672581	Lactoferrin, FITC	rb	1.5 mg
674581	Lactoferrin, HRP	rb	1.5 ml
610221	$\alpha$ -Lipoprotein	gt	2 ml
610231	$\beta$ -Lipoprotein	gt	2 ml
691191	Luteinizing Hormone	3LH5B6YH4	0.25 ml
642371	Lysozyme	sh	2 ml
692041	$\alpha_2$ -Macroglobulin	A2M1	0.5 mg
650821	$\alpha_2$ -Macroglobulin	gt	2 ml
647081	$\alpha$ -MSH, Hemocyanin	rb	0.25 ml
650891	$\beta_2$ -Microglobulin	rb	2 ml
647431	Motilin	rb	0.25 ml
640761	Myoglobin	gt	2 ml
688071	Myoglobin	rb	0.5 ml
637502	Myoglobin	MG-1	0.25 ml
691201	Myoglobin	MG1	0.2 ml
681011	Plasminogen	gt	2 ml
659181	Platelet Factor 4	rb	1 ml
610241	Prealbumin	gt	2 ml
682741	Prealbumin	sh	2 ml
613101	Progesterone-11 $\alpha$ -hemi-succinate, RIA	rb	100 T
631051	Progesterone	2H4RT	0.5 ml
647121	Prolactin	rb	0.25 ml
691211	Prolactin	BGX031A	0.2 ml
680301	Properdin	gt	2 ml
613551	Prostaglandin E <sub>2</sub> -BSA	rb	100 T
613561	Prostaglandin F <sub>2<math>\alpha</math></sub> -BSA	rb	100 T
613591	6-keto-Prostaglandin F <sub>1<math>\alpha</math></sub>	rb	100 T
653042	Prostatic Acid Phosphatase	rb	0.5 ml
659201	Protein S	rb	1 ml
681001	Prothrombin	gt	2 ml
610391	Whole Serum	gt	2 ml
650291	Whole Serum	rb	2 ml
682651	Whole Serum	sh	2 ml
682652			5 ml
613181	Testosterone-19-CME-BSA	rb	100 T

Cat. No.	Specificity	Clone/Host	Quantity
613151	Tstosterone-7 $\alpha$ -BSA	rb	100 T
647381	Testosterone-BSA	rb	0.25 ml
637521	Thrombospondin	TSP-B7	0.5 ml
659231	Thrombospondin	rb	1 ml
613531	Thromboxane B <sub>2</sub> -BSA	rb	100 T
640971	Thyroglobulin	sh	1 ml
640981	Thyroid Binding Globulin	sh	1 ml
647161	TSH	sh	0.25 ml
631021	Thyroxine	1GA	250 T
658501	L-Thyroxine-BSA	rb	1 ml
691231	Transferrin	HT1-13.6.3	0.2 ml
654331	Transferrin, affin.	ck	1 ml
654341	Transferrin, FITC	ck	1 ml
654351	Transferrin, HRP	ck	1 ml
610261	Transferrin	gt	2 ml
682131	Transferrin	sh	2 ml
682132	Transferrin, Neph.	sh	5 ml
658511	L-Triiodothyronine-BSA	rb	1 ml
640831	$\alpha_1$ -Trypsin Inhibitor	gt	1 ml
659251	Von Willebrand Factor	rb	1 ml
659261	Von Willebrand Factor	rb	100 $\mu$ g

## Animal Protein Antibodies

654361 -20°C	<b>ALBUMIN, BOVINE</b> <b>POLYCLONAL ANTIBODY</b> Anti-Bovine Host: chicken Form: whole serum Conc/Titer: 1:4 Applications: Immunodiffusion	1 ml
654371 -20°C	<b>ALBUMIN, BOVINE</b> <b>POLYCLONAL ANTIBODY</b> Anti-Bovine Host: chicken Form: affinity purified Conc/Titer: 1 mg/ml Applications: A <sub>280</sub>	1 ml
654381 -20°C	<b>ALBUMIN, BOVINE</b> <b>POLYCLONAL ANTIBODY</b> Anti-Bovine Host: chicken Form: affinity purified Conc/Titer: 1 mg/ml Applications: Indirect Immunofluorescence FITC conjugated	1 ml
654391 -20°C	<b>ALBUMIN, BOVINE</b> <b>POLYCLONAL ANTIBODY</b> Anti-Bovine Host: chicken Form: affinity purified Conc/Titer: 1 mg/ml Applications: Indirect Immunofluorescence HRP Conjugated	1 ml
651111 -20°C	<b>ALBUMIN, BOVINE</b> <b>POLYCLONAL ANTIBODY</b> Anti-Bovine Host: rabbit Form: lyophilized Conc/Titer: 2 mg/ml Applications: Immunoprecipitin	2 ml

## CATALOG NUMBER

651151 -20°C	<b>ALBUMIN, CHICKEN</b> <b>POLYCLONAL ANTIBODY</b> Anti-Chicken Host: rabbit Form: liquid Conc/Titer: 1-2 mg/ml The original immunogen was chicken egg albumin. Applications: Immunoprecipitin	2 ml
645601 -20°C	<b>ALBUMIN, MOUSE</b> <b>POLYCLONAL ANTIBODY</b> Anti-Mouse Host: rabbit Form: lyophilized Conc/Titer: 1:4 Applications: Ouchterlony Double Diffusion	2 ml
645621 -20°C	<b>ALBUMIN, RAT</b> <b>POLYCLONAL ANTIBODY</b> Anti-Rat Host: rabbit Form: liquid Conc/Titer: 1:4 Applications: Immunohistochemistry	2 ml
637991 -20°C	<b>ASCITES FLUID, Mouse</b> <b>MONOCLONAL ANTIBODY</b> (Negative Control Reagent) Clone: NS-1 Isotype: mouse ascites Conc/Titer: determined by positive control titer Applications: ELISA; IFA of Cell Suspensions; Immunohistology This "monoclonal" control reagent has been produced and processed similarly to regular monoclonal antibody ascites preparations. However, it has undefined specificity, therefore, it can be used as a universal control in immunoassay applications.	0.25 ml
643751 0-5°C	<b>C3</b> <b>POLYCLONAL ANTIBODY</b> Anti-Dog Host: rabbit Form: lyophilized Conc/Titer: 1:4 Applications: Ouchterlony Double Diffusion	2 ml
670551 0-5°C	<b>FERRITIN</b> <b>POLYCLONAL ANTIBODY</b> Anti-Horse Host: goat Form: affinity purified sterile liquid Conc/Titer: 2 mg/ml by A <sub>280</sub>	2 mg
670561 0-5°C	<b>FERRITIN</b> <b>POLYCLONAL ANTIBODY</b> Anti-Horse Host: rabbit Form: affinity purified sterile liquid Conc/Titer: 2 mg/ml by A <sub>280</sub>	2 mg
674551 0-5°C	<b>FERRITIN</b> <b>POLYCLONAL ANTIBODY</b> Anti-Horse Host: goat HRP Conjugated Applications: Immunofluorescence.	2 ml

# Immunobiologicals

CATALOG NUMBER

647071 **GROWTH HORMONE, Sheep** 0.25 ml  
 0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Sheep**  
**Host:** rabbit  
**Form:** lyophilized  
**Conc/Titer:** 1:20-1:40  
 Applications: Immunohistochemistry; RIA; EIA; Indirect Immunofluorescence  
 This antibody demonstrates broad species cross-reactivity.

650011 **SERUM, Bovine** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Bovine**  
**Host:** rabbit  
**Form:** liquid

650391 **SERUM, Bovine** 1 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Bovine**  
**Host:** rabbit  
**Form:** purified liquid absorbed with porcine/horse serum  
**Applications:** immunohistochemistry procedures.

650031 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Cat**  
**Host:** rabbit  
**Form:** purified antiserum  
 Applications: Immunohistochemistry

650041 **SERUM, Chicken** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Chicken**  
**Host:** rabbit  
**Form:** purified liquid  
**Applications:** immunohistochemistry procedures.

650251 **SERUM, Dog** 2 ml  
 0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Dog**  
**Host:** rabbit  
**Form:** liquid

650061 **SERUM, Goat** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Goat**  
**Host:** rabbit  
**Form:** liquid

610011 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Guinea Pig**  
**Host:** goat  
**Form:** purified liquid  
 Applications: Immunohistology

650071 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Guinea Pig**  
**Host:** rabbit  
**Form:** liquid

CATALOG NUMBER

650281 **SERUM, Hamster** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Hamster**  
**Host:** rabbit  
**Form:** purified liquid  
**Applications:** immunohistochemistry procedures.

650121 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Horse**  
**Host:** rabbit  
**Form:** liquid

650131 **SERUM, Horse** 1 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Horse**  
**Host:** rabbit  
**Form:** purified liquid absorbed with porcine/horse serum  
**Applications:** immunohistochemistry procedures.

650141 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Mouse**  
**Host:** rabbit  
**Form:** liquid

650351 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Porcine**  
**Host:** rabbit  
**Form:** liquid

650371 **SERUM, Porcine** 1 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Porcine**  
**Host:** rabbit  
**Form:** purified liquid absorbed with horse/bovine serum  
**Applications:** immunohistochemistry procedures.

650161 **SERUM** 2 ml  
 0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Rabbit**  
**Host:** goat  
**Form:** liquid

650181 **SERUM, Rat** 2 ml  
**POLYCLONAL ANTIBODY**  
**Anti-Rat**  
**Host:** rabbit  
**Form:** purified liquid  
**Applications:** immunohistochemistry procedures.

650191 **SERUM** 2 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Sheep**  
**Host:** rabbit  
**Form:** liquid

630051 **THY 1.1** 0.25 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-Mouse**  
**Clone:** TN26a  
**Isotype:** mouse IgG, liquid  
**Conc/Titer:** 4 mg/ml  
 Applications: Lowry

CATALOG NUMBER

633021 **THY 1.1** 0.25 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-Mouse**  
**Clone:** TN26  
**Isotype:** mouse IgM  
**Applications:** Immunoassay.  
**FITC Conjugated**  
 This antibody is the same as ICN Code No. 63-005-1 that has been conjugated with fluorescein isothiocyanate. It is suitable for immunofluorescence procedures.

630021 **THY 1.2** 0.5 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-Mouse**  
**Clone:** TC  
**Isotype:** mouse IgG, liquid  
**In vivo Cytotoxic**

630011 **THY 1.2** 0.25 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-Mouse**  
**Clone:** TS  
**Isotype:** mouse IgG, liquid  
**Conc/Titer:** 4 mg/ml  
**Applications:** Lowry

633011 **THY 1.2** 0.25 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-Mouse**  
**Clone:** TS  
**Isotype:** mouse IgG  
**Applications:** Immunoassay  
**FITC Conjugated**  
 This antibody is the same as ICN Code No. 63-001-1 that has been conjugated with fluorescein isothiocyanate. It is suitable for immunofluorescence procedures.

633511 **THY 1.2** 0.25 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-Mouse**  
**Clone:** TS  
**Isotype:** mouse IgG  
**Applications:** immunodetection methods.  
**RITC Conjugated**

## Miscellaneous Antibodies

55975 **ALKALINE PHOSPHATASE** 5 ml  
 0-5°C **POLYCLONAL ANTIBODY**  
**Anti-Bovine**  
**Host:** goat  
**Form:** lyophilized (IgG)  
**Applications:** Immunostaining of cell suspensions, acetone-fixed frozen tissue sections, and formalin-fixed, paraffin-embedded tissue sections.

648041 **AMIKACIN-RSA** 1 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** whole serum  
**Applications:** Immunoassay

CATALOG NUMBER

637991 **ASCITES FLUID, Mouse** 0.25 ml  
 -20°C **MONOCLONAL ANTIBODY**  
**(Negative Control Reagent)**  
**Clone:** NS-1  
**Isotype:** mouse ascites  
**Conc/Titer:** determined by positive control titer  
**Applications:** ELISA; IFA of Cell Suspensions; Immunohistology  
 This "monoclonal" control reagent has been produced and processed similarly to regular monoclonal antibody ascites preparations. However, it has undefined specificity, therefore, it can be used as a universal control in immunoassay applications.

648051 **GENTAMICIN-KLH** 1 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** whole sera liquid  
**Applications:** Immunoassay

618101 **HEMOCYANIN** 1 ml  
 0-5°C **POLYCLONAL ANTIBODY**  
**Anti-KLH**  
**Host:** rabbit  
**Form:** affinity purified antiserum  
**Applications:** Immunoprecipitin

648031 **KANAMYCIN-BSA** 1 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** whole sera liquid  
**Applications:** Immunoassay

699551 **LEGIONELLA SEROGROUP I** 50 µg  
 0-5°C **MONOCLONAL ANTIBODY**  
**Anti-Legionella Type 1**  
**Clone:** LPS 1-4  
**Conc/Titer:** mouse IgG<sub>3</sub>  
**Conc/Titer:** 100 µg/ml  
**Applications:** Immunohistology

614971 **MORPHINE-BSA** 1 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** rabbit  
**Applications:** RIA

NEW 632161 **NSF** 100 µg  
 -20°C **MONOCLONAL ANTIBODY**  
**Anti-N-ethylmaleimide-sensitive fusion protein**  
**Clone:** NSF-1  
**Isotype:** IgG  
**Conc/Titer:** 1:500-1:2000  
**Applications:** immunoblotting; ELISA; immunoprecipitation  
 NSF is necessary for fusion of transport vesicles to their target membranes

648101 **PHENOBARBITOL-RSA** 1 ml  
 -20°C **POLYCLONAL ANTIBODY**  
**Anti-Human**  
**Host:** goat  
**Form:** whole sera liquid  
**Applications:** Immunoassay

# Immunobiologicals

CATALOG  
NUMBER

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**NEW**  
632171  $\alpha/\beta$ -SNAP 100  $\mu$ g  
-20°C  
**MONOCLONAL ANTIBODY**  
Anti-Human  
Clone: S0006  
Isotype: IgG  
Conc/Titer: 1:500-1:2000  
Applications: immunoblotting; ELISA; immunoprecipitation  
SNAPs are required for the fusion of transport vesicles to their target membranes

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Primary Antibodies

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**NEW** TELOMERASE-ASSOCIATED PROTEIN I  
**POLYCLONAL ANTIBODY**  
Anti-Human  
Host: rabbit  
Form: affinity purified  
692231 50  $\mu$ g  
692232 100  $\mu$ g

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**NEW** TELOMERASE REVERSE TRANSCRIPTASE  
**POLYCLONAL ANTIBODY**  
Anti-Human  
Host: Rabbit  
Form: affinity purified liquid  
692221 50  $\mu$ g  
692222 100  $\mu$ g

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648021 TOBRAMYCIN-KLH 1 ml  
-20°C  
**POLYCLONAL ANTIBODY**  
Anti-Human  
Host: goat  
Form: liquid whole antisera  
Applications: Immunoassay