



Qty: 100 µg/200 µl  
Mouse anti-MUC18  
(CD146)  
Catalog No. 35-7800  
Lot No.

## Mouse anti-MUC18 (CD146)

### FORM

This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

**CLONE:** OJ79

**ISOTYPE:** Mouse IgG<sub>1</sub>

### IMMUNOGEN

Recombinant human MUC18 (D1-D5) Fc protein.

### SPECIFICITY

This antibody reacts with the human MUC18 (CD146, Mel-CAM, MCAM) protein.

### REACTIVITY

Reactivity is confirmed with human SK-Mel-37 melanoma cell lysates.

Sample	ELISA	Immuno-histochemistry (frozen)	Flow Cytometry	Western Blotting
Human	N/A	+++	+++	+
Mouse	N/A	ND	ND	ND
Immunogen	+++	N/A	N/A	N/A

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Immunohistochemistry (frozen) :** 5-10 µg/mL  
**Flow Cytometry :** 5-10 µg/mL  
**ELISA :** 0.1-1.0 µg/mL  
**Western Blotting :** 1-10 µg/mL

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI357800

(Rev 10/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

**BACKGROUND**

MUC18, also known as CD146, Mel-CAM, A32 antigen, S-Endo-1, and MCAM, is an integral membrane glycoprotein belonging to the immunoglobulin superfamily.<sup>1</sup> This protein has been localized to the cell-cell junction in all endothelial cells<sup>2</sup> and has also been observed in other normal and malignant cell types. In addition to its recognized role as a calcium-independent cell adhesion molecule, MUC18 may also act as a signal transduction molecule in the recruitment of the Fyn kinase and the subsequent tyrosine-phosphorylation of intracellular proteins involved in the dynamics of the actin cytoskeleton.<sup>3</sup>

MUC18 contains a characteristic extracellular structure consisting of two variable (V) and three constant (C2) immunoglobulin homology domains,<sup>4</sup> a single membrane-spanning domain, and a short cytoplasmic tail.<sup>2</sup> In cultured human cells, it is synthesized as a 100 kDa precursor and then processed into a 120 kDa mature form.<sup>5</sup> A soluble form of CD146, ~10 kDa smaller than the cell-associated form, has also been identified.<sup>5</sup>

MUC18 was originally identified as a melanoma-associated antigen, where it acts as a progression marker. In melanoma, CD146 exhibits high levels of expression in malignant cells, correlating in frequency with increasing tumor thickness.<sup>6</sup> Highest expression occurs in metastatic lesions. MUC18 has been implicated in both tumor progression and suppression; in melanoma, it promotes tumor progression by facilitating the interaction between melanoma cells and endothelial cells,<sup>1</sup> while in breast carcinoma, its frequent loss suggests it as a tumor suppressor.<sup>7</sup> MUC18 has also been proposed as a marker for prostate cancer, based on mRNA and protein expression levels in prostate cancer cell lines and tissues at different stages of malignancy.<sup>8</sup>

**REFERENCES**

1. Shih IM. *J Pathol* 189(1):4-11, 1999.
2. Bardin N, et al. *Biochem Biophys Res Commun* 218(1):210-216, 1996.
3. Anfosso F, et al. *J Biol Chem* 276(2):1564-1569, 2001.
4. Sers C, et al. *PNAS* 90:8514-8518, 1993.
5. Bardin N, et al. *FEBS Lett* 421(1):12-14, 1998.
6. Mintz-Weber CS, Johnson JP. *J Biol Chem* 275(44):34672-34680, 2000.
7. Shih LM, et al. *Am J Pathol* 151(3):745-751, 1997.
8. Wu GJ, et al. *Prostate* 48(4):305-315, 2001.

**RELATED PRODUCTS**

<b>Product</b>	<b>Clone/PAD*</b>	<b>Cat. No.</b>
Rabbit anti-MUC18	ZMD.218	34-6800
Mouse anti-MUC1	VU-4-H5	18-2298
Mouse anti-MUC2	CCP58	18-2299
Mouse anti-MUC4	1G8	35-4900
Mouse anti-MUC5AC	45M1	18-2261
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

\*PAD: Polyclonal Antibody Designation

<b>Conjugate</b>	<b>ZyMAX™ Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX™ Goat x Mouse IgG (H+L)</b>
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

Zymed® and ZyMAX™ are trademarks of Zymed Laboratories Inc. Cy™ is a trademark of Amersham Life Sciences, Inc. Sepharose® is a registered trademark of Pharmacia LKB.

**For Research Use Only**

LF020603

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI357800

(Rev 10/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.