



Qty: 100 µg/200 µL
Mouse anti-Galectin-1
Catalog No. 437400

Mouse anti- Galectin-1

FORM

This affinity-purified mouse 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: 6C8.4-1 **Isotype:** IgG1

IMMUNOGEN

Mixture of two peptides from the middle and C-terminal regions of human Galectin-1 protein (accession # P09382, NP_002296.1). These peptides are ~90% similar to swine, rat, ovine, Chinese hamster sequences and 80% similar to bovine and mouse sequences.

SPECIFICITY

This antibody is specific for human Galectin-1 (beta-galactoside-binding lectin L-14-I, Lactose-binding lectin 1, S-Lac lectin 1, Galaptin, 14 kDa lectin, HPL, HBL) protein. On Western blots of human PC3 cell lysates, it identifies the target band at ~14 kDa.

REACTIVITY

Reactivity has been confirmed with human PC3 and HUV-EC-C and mouse 3T3 cell lysates using Western blotting. The reactivity has also been confirmed with human HeLa cells by immunofluorescence. Based on amino acid sequence homology, reactivity with swine, rat, ovine, Chinese hamster, bovine and mouse, is also expected.

Sample	Western Blotting	Immunofluorescence
Human	+++	+++
Mouse	+++	ND
Swine	ND	ND
Rat	ND	ND
Ovine	ND	ND
Hamster (Chinese)	ND	ND
Bovine	ND	ND

(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.

Western Blotting: 1-2 µg/mL
Immunofluorescence: 2 µg/mL

(cont')

www.invitrogen.com

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

PI437400

(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). 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.

STORAGE

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

BACKGROUND

The galectins are a family of beta-galactoside-binding proteins implicated in modulating cell-cell and cell-matrix interactions. Galectin-1 is a homodimeric protein that binds Igals3bp and is widely expressed in cardiac, smooth, and skeletal muscle, neurons, thymus, kidney, placenta and hematopoietic cells. Galectin-1 has a diverse range of activities in relation to cell survival and proliferation including acting as a mitogen, inhibiting cellular proliferation, and promoting cellular apoptosis.¹ Galectin-1 is one of the major proteins expressed in human mesenchymal stem cells (hMSC),² it binds to cell surface receptors (such as CD45, CD3, CD4, CD7) and induces T cell death.³ It is secreted and found at the cell surface of MSC, participating in extracellular matrix – cell interactions. It is also expressed in a subset of slowly dividing subventricular zone astrocytes, which includes the neural stem cells.⁴

In the presence of galectin-1 human fetal mesenchymal stem cells also assume a muscular phenotype indicating that this protein may have relevance in developing therapies for muscular dystrophies. Galectin-1 can also be secreted by activated CD8(+) T-lymphocytes. This secreted protein acts as a soluble adhesion molecule by facilitating attachment of HIV-1 to the cell surface.⁵ This suggests that galectin-1 might affect the pathogenesis of HIV-1 infection. Galectin-1 is also a potential cancer target contributing to tumour evasion of immune responses.⁶

REFERENCES

1. Scott K et al. *Glycoconj J* 19(7-9):467-77, 2004.
2. Kadri T et al. *Stem Cells Dev* 14(2):204-12, 2005.
3. Stillman BN et al. *J Immunol* 176(2):778-89, 2006.
4. Sakaguchi M et al. *Proc Natl Acad Sci U S A* 103(18):7112-7, 2006.
5. Ouellet M et al. *J Immunol* 174(7):4120-6, 2005.
6. Rabinovich GA et al. *Br J Cancer* 92(7):1188-92, 2005.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose 4B	10-1041
rec-Protein G	Sepharose 4B	10-1241
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

Conjugate	Goat anti-rabbit IgG (H+L)	Goat anti-mouse IgG (H+L)	Ex/Em*	Fluorescence similar to--
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

For Research Use Only

www.invitrogen.com

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

PI437400

(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). 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.