



Qty: 100 µg/400 µL

Rabbit anti-Galectin-1 (N-term)

Catalog No. 42-5900

Lot No.

Rabbit anti-Galectin-1 (N-term)

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.580

IMMUNOGEN

Synthetic peptide derived from the N-terminal region of the human, mouse, rat, and pig galectin-1 proteins, which differ from bovine, sheep, and dog by two amino acid changes

SPECIFICITY

This antibody is specific for the galectin-1 (lectin, β-galactoside-binding lectin L-14-I, lactose-binding lectin 1, S-lac lectin 1, galaptin) protein. On Western blots, it identifies the target band at ~14 kDa.

REACTIVITY

Reactivity has been confirmed with human HUVEC and PC-3 and mouse NIH 3T3 cell lysates and ovary homogenates. Based on amino acid sequence homology, reactivity with bovine, sheep, pig, rat, and dog is expected.

| Sample | Western Blotting |
|--------|------------------|
| Human | +++ |
| Mouse | +++ |
| Bovine | ND |
| Sheep | ND |
| Pig | ND |
| Rat | ND |
| Dog | 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: 1-3 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)

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BACKGROUND

The galectins are a family of β -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 binds to cell surface receptors such as CD45, CD3, CD4, CD7, and it induces T cell death.² Galectin-1 is one of the major proteins expressed in human mesenchymal stem cells (hMSC).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.⁵ 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, suggesting that galectin-1 might affect the pathogenesis of HIV-1 infection.⁶ Galectin-1 is also a potential cancer target contributing to tumor evasion of immune responses.⁷

REFERENCES

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2. Stillman BN, et al. *J Immunol* 176(2):778-789, 2006.
3. Kadri T, et al. *Stem Cells Dev* 14(2):204-212, 2005.
4. Sakaguchi M, et al. *PNAS* 103(18):7112-7117, 2006.
5. Chan J, et al. *Stem Cells* 24(8):1879-1891, 2006.
6. Ouellet M, et al. *J Immunol* 174(7):4120-4126, 2005.
7. Rabinovich GA. *Br J Cancer* 92(7):1188-1192, 2005.

RELATED PRODUCTS

| Product | Conjugate | Cat. No. |
|----------------|---------------------------|-----------------|
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| rec-Protein G | Sepharose [®] 4B | 10-1241 |

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|-------------------|--|---|
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| FITC | 81-6111 | 81-6511 |
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