

galectin-1 (H-45): sc-28248

BACKGROUND

Galectins are a family of soluble β -galactoside-binding animal lectins that modulate cell-to-cell adhesion and cell-to-extracellular matrix (ECM) interactions and play a role in tumor progression, pre-mRNA splicing and apoptosis. Specifically, galectin-1 is an autocrine regulator of cell-proliferation that plays a role in the maintenance of G_0 and in the control of G_2 traverse. Galectin-1, also known as LGALS1, is the 14.5 kDa protein product of a single gene linked to human chromosome 22q13.1. The galectin-1 protein contains 135 amino acids, a single internal EcoRI site and a polyadenylation signal. Galectin-1 can localize to both intracellular and extracellular space. Galectin-1 is expressed in human placenta, human lung, HL-6, HepG2 and CEM cells.

REFERENCES

1. Couraud, P.O., et al. 1989. Molecular cloning, characterization, and expression of a human 14 kDa lectin. *J. Biol. Chem.* 264: 1310-1316.
2. Hirabayashi, J., et al. 1989. Cloning and nucleotide sequence of a full-length cDNA for human 14 kDa β -galactoside-binding lectin. *Biochim. Biophys. Acta* 1008: 85-91.

CHROMOSOMAL LOCATION

Genetic locus: LGALS1 (human) mapping to 22q13.1; Lgals1 (mouse) mapping to 15 E1.

SOURCE

galectin-1 (H-45) is a rabbit polyclonal antibody raised against amino acids 1-45 mapping at the N-terminus of galectin-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

galectin-1 (H-45) is recommended for detection of galectin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

galectin-1 (H-45) is also recommended for detection of galectin-1 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for galectin-1 siRNA (h): sc-35441, galectin-1 siRNA (m): sc-37259, galectin-1 shRNA Plasmid (h): sc-35441-SH, galectin-1 shRNA Plasmid (m): sc-37259-SH, galectin-1 shRNA (h) Lentiviral Particles: sc-35441-V and galectin-1 shRNA (m) Lentiviral Particles: sc-37259-V.

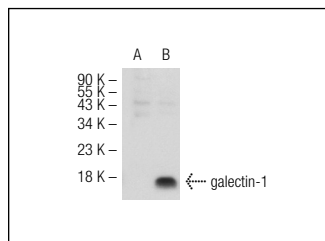
Molecular Weight of galectin-1: 14 kDa.

Positive Controls: galectin-1 (m): 293T Lysate: sc-120390, HL-60 whole cell lysate: sc-2209 or NIH/3T3 whole cell lysate: sc-2210.

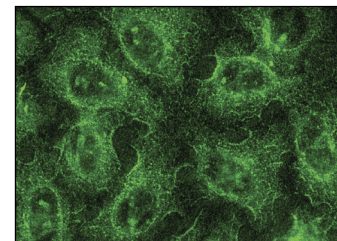
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



galectin-1 (H-45): sc-28248. Western blot analysis of galectin-1 expression in non-transfected: sc-117752 (A) and mouse galectin-1 transfected: sc-120390 (B) 293T whole cell lysates.



galectin-1 (H-45): sc-28248. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization.

SELECT PRODUCT CITATIONS

1. Puchades, M., et al. 2007. Proteomic investigation of glioblastoma cell lines treated with wild-type p53 and cytotoxic chemotherapy demonstrates an association between galectin-1 and p53 expression. *J. Proteome Res.* 6: 869-875.
2. Blois, S.M., et al. 2008. Interaction between dendritic cells and natural killer cells during pregnancy in mice. *J. Mol. Med.* 86: 837-852.
3. Maes, O.C., et al. 2008. Changes in MicroRNA expression patterns in human fibroblasts after low-LET radiation. *J. Cell. Biochem.* 105: 824-834.
4. Weinkauff, M., et al. 2009. 2-D PAGE-based comparison of proteasome inhibitor bortezomib in sensitive and resistant mantle cell lymphoma. *Electrophoresis* 30: 974-986.
5. Jeon, C.H., et al. 2009. Induction of S100A4, S100A6, and galectin-1 during the lineage commitment of CD4⁺CD8⁺ thymocyte cell line is suppressed by 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Toxicol. Lett.* 187: 157-163.
6. Zhao, X.Y., et al. 2010. Hypoxia inducible factor-1 mediates expression of galectin-1: the potential role in migration/invasion of colorectal cancer cells. *Carcinogenesis* 31: 1367-1375.
7. Zhao, X.Y., et al. 2011. Synergistic induction of galectin-1 by CCAAT/enhancer binding protein α and hypoxia-inducible factor 1 α and its role in differentiation of acute myeloid leukemic cells. *J. Biol. Chem.* 286: 36808-36819.
8. Reynolds, J.L., et al. 2012. Morphine and galectin-1 modulate HIV-1 infection of human monocyte-derived macrophages. *J. Immunol.* 188: 3757-3765.

RESEARCH USE

For research use only, not for use in diagnostic procedures.