

galectin-1 (D-1): sc-271819

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 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, Hep G2 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.
3. Abbott, W.M., et al. 1989. Evidence that the 14 kDa soluble β -galactoside-binding lectin in man is encoded by a single gene. *Biochem. J.* 259: 291-294.
4. Goldstone, S.D., et al. 1991. Isolation of a cDNA clone, encoding a human β -galactoside binding protein, overexpressed during glucocorticoid-induced cell death. *Biochem. Biophys. Res. Commun.* 178: 746-750.
5. Baldini, A., et al. 1993. Mapping on human and mouse chromosomes of the gene for the β -galactoside-binding protein, an autocrine-negative growth factor. *Genomics* 15: 216-218.
6. Mehrabian, M., et al. 1993. Two members of the S-lac lectin gene family, LGALS1 and LGALS2, reside in close proximity on human chromosome 22q12-q13. *Genomics* 15: 418-420.
7. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 150570. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Lgals1 (mouse) mapping to 15 E1.

SOURCE

galectin-1 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 57-91 within an internal region of galectin-1 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271819 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

galectin-1 (D-1) is recommended for detection of galectin-1 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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).

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

Molecular Weight of galectin-1: 14 kDa.

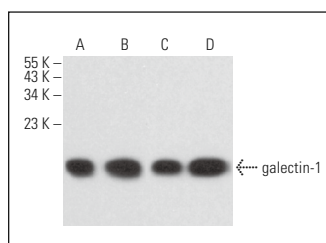
Positive Controls: NIH/3T3 whole cell lysate: sc-2210, RAW 264.7 whole cell lysate: sc-2211 or C6 whole cell lysate: sc-364373.

RECOMMENDED SUPPORT REAGENTS

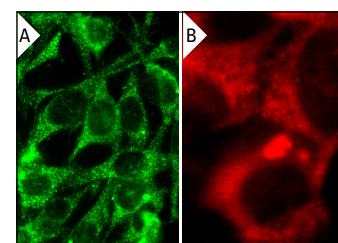
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



galectin-1 (D-1): sc-271819. Western blot analysis of galectin-1 expression in NIH/3T3 (A), RAW 264.7 (B), A-10 (C) and C6 (D) whole cell lysates.



galectin-1 (D-1): sc-271819. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (A,B).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.