SANTA CRUZ BIOTECHNOLOGY, INC.

galectin-1 (K-20): sc-19279

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 G0 and in the control of G2 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 beta-galactoside-binding lectin. Biochim. Biophys. Acta 1008: 85-91.
3. Abbott, W.M., et al. 1989. Evidence that the 14 kDa soluble beta-galactoside- binding lectin in man is encoded by a single gene. Biochem. 259: 291-294.
4. Goldstone, S.D., et al. 1991. Isolation of a cDNA clone, encoding a human beta-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 beta-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/
8. Shimonishi, T., et al. 2001. Expression of endogenous galectin-1 and galectin-3 in intrahepatic cholangiocarcinoma. Hum. Pathol. 32: 302-310.

CHROMOSOMAL LOCATION

Genetic locus: LGALS1 (human) mapping to 16p12; Lgals1 (mouse) mapping to 15 E.

SOURCE

galectin-1 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of galectin-1 of mouse origin.

PROTOCOLS

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

PRODUCT

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

Blocking peptide available for competition studies, sc-19279 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

galectin-1 (K-20) is recommended for detection of galectin-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg 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.

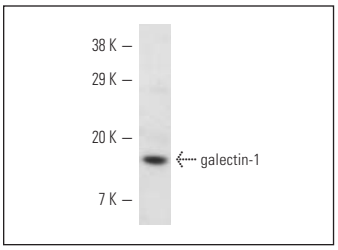
Molecular Weight of galectin-1: 14 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

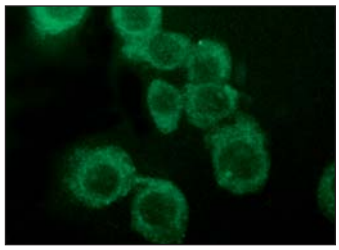
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



galectin-1 (K-20): sc-19279. Western blot analysis of galectin-1 expression in NIH/3T3 whole cell lysate.



galectin-1 (K-20): sc-19279. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

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.