

# galectin-1 (S-14): sc-19277

## BACKGROUND

Galectins are a family of soluble  $\beta$ -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, HepG2 and CEM cells.

## CHROMOSOMAL LOCATION

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

## SOURCE

galectin-1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of galectin-1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-19277 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

galectin-1 (S-14) 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  $\mu$ g per 100-500  $\mu$ 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 (S-14) is also recommended for detection of galectin-1 in additional species, including canine.

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.

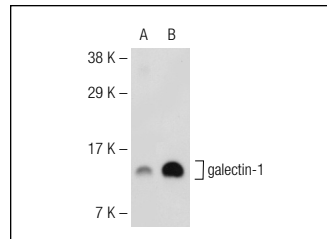
Molecular Weight of galectin-1: 14 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, NIH/3T3 whole cell lysate: sc-2210 or SK-MEL-28 cell lysate: sc-2236.

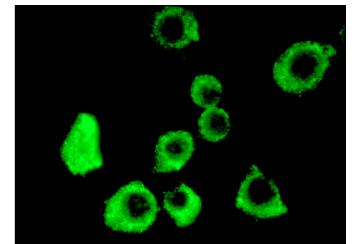
## RECOMMENDED SECONDARY REAGENTS

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 (S-14): sc-19277. Western blot analysis of galectin-1 expression in HL-60 (A) and NIH/3T3 (B) whole cell lysates.



galectin-1 (S-14): sc-19277. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Valkova, N. 2005. Nek8 mutation causes overexpression of galectin-1, sorcin, and vimentin and accumulation of the major urinary protein in renal cysts of jck mice. *Mol. Cell. Proteomics* 4: 1009-1018.
- Akama, K., et al. 2008. Proteomic identification of differentially expressed genes in mouse neural stem cells and neurons differentiated from embryonic stem cells *in vitro*. *Biochim. Biophys. Acta* 1784: 773-782.
- Potthoff, S.A., et al. 2008. The glomerular proteome in a model of chronic kidney disease. *Proteomics Clin. Appl.* 2: 1127-1139.
- Okano, K., et al. 2008. Galectin-1 suppresses  $\alpha$ 2(I) collagen through Smad3 in renal epithelial cells. *Cell. Mol. Life Sci.* 65: 3304-3311.
- Klopstock, N., et al. 2009. HCV tumor promoting effect is dependent on host genetic background. *PLoS ONE* 4: e5025.
- Mason, S.B., et al. 2011. Differential expression of renal proteins in a rodent model of meckel syndrome. *Nephron Exp. Nephrol.* 117: e31-e38.
- Upreti, M., et al. 2011. Tumor-endothelial cell three-dimensional spheroids: new aspects to enhance radiation and drug therapeutics. *Transl. Oncol.* 4: 365-376.

## RESEARCH USE

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