

# galectin-4 (G-20): sc-19288

## 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. One member of this family, galectin-4, also known as Gal-4, L36 or LGALS4, maps to human chromosome 19q13.2. The galectin-4 protein is composed of 323 amino acids and contains two homologous carbohydrate recognition domains (CRD) and all amino acids typically conserved in the galectin family. Expression of galectin-4 correlates with the malignant potential of human hepatocellular carcinoma (HCC) and is differentially regulated depending on cell-cell contact, serum growth factors, cell growth and cell differentiation status. Galectin-4 expression is detected in epithelial cells of the colon, rectum and intestine, and in HT29 and LS174T cell lines. Galectin-4 is underexpressed in colorectal cancer and is preferentially upregulated in cells prone to peritoneal dissemination.

## 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. Chiu, M.L., et al. 1994. An adherens junction protein is a member of the family of lactose-binding lectins. *J. Biol. Chem.* 269: 31770-31776.
3. Rechreche, H., et al. 1997. Cloning and expression of the mRNA of human galectin-4, an S-type lectin down-regulated in colorectal cancer. *Eur. J. Biochem.* 248: 225-230.
4. Gitt, M.A., et al. 1998. Galectin-4 and galectin-6 are two closely related lectins expressed in mouse gastrointestinal tract. *J. Biol. Chem.* 273: 2954-2960.
5. Kondoh, N., et al. 1999. Identification and characterization of genes associated with human hepatocellular carcinogenesis. *Cancer Res.* 59: 4990-4996.
6. Shimonishi, T., et al. 2001. Expression of endogenous galectin-1 and galectin-3 in intrahepatic cholangiocarcinoma. *Hum. Pathol.* 32: 302-310.
7. Hippo, Y., et al. 2001. Differential gene expression profiles of scirrhous gastric cancer cells with high metastatic potential to peritoneum or lymph nodes. *Cancer Res.* 61: 889-895.
8. LocusLink Report (LocusID: 3960). <http://www.ncbi.nlm.nih.gov/LocusLink/>

## CHROMOSOMAL LOCATION

Genetic locus: Lgals4 (mouse) mapping to 7 A3.

## SOURCE

galectin-4 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of galectin-4 of mouse origin.

## STORAGE

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

## 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-19288 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

galectin-4 (G-20) is recommended for detection of galectin-4 of mouse 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).

Suitable for use as control antibody for galectin-4 siRNA (m): sc-37428, galectin-4 shRNA Plasmid (m): sc-37428-SH and galectin-4 shRNA (m) Lentiviral Particles: sc-37428-V.

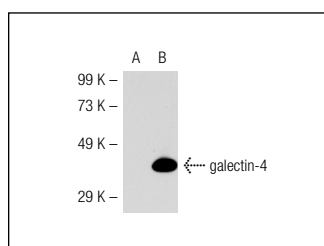
Molecular Weight of galectin-4: 36 kDa.

Positive Controls: BC<sub>3</sub>H1 cell lysate: sc-2299 or galectin-4 (m): 293T Lysate: sc-126885.

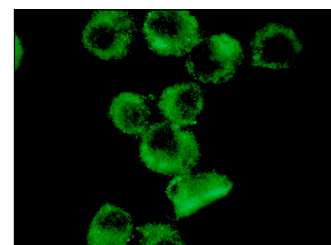
## RECOMMENDED SECONDARY REAGENTS

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-4 (G-20): sc-19288. Western blot analysis of galectin-4 expression in non-transfected: sc-117752 (A) and mouse galectin-4 transfected: sc-126885 (B) 293T whole cell lysates.



galectin-4 (G-20): sc-19288. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.