SANTA CRUZ BIOTECHNOLOGY, INC.

galectin-4 (T-20): sc-19286

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. 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, 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.

CHROMOSOMAL LOCATION

Genetic locus: LGALS4 (human) mapping to 19q13.2.

SOURCE

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

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.

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-19286 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

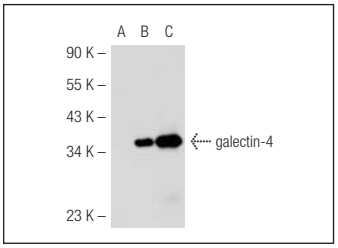
galectin-4 (T-20) is recommended for detection of galectin-4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for galectin-4 siRNA (h): sc-37102, galectin-4 shRNA Plasmid (h): sc-37102-SH and galectin-4 shRNA (h) Lentiviral Particles: sc-37102-V.

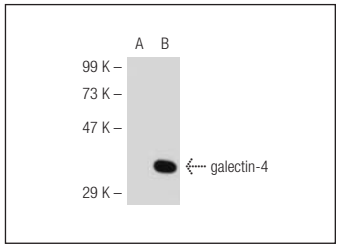
Molecular Weight of galectin-4: 36 kDa.

Positive Controls: galectin-4 (h): 293T Lysate: sc-114260, galectin-4 (m): 293T Lysate: sc-126885 or T84 whole cell lysate.

DATA



galectin-4 (T-20): sc-19286. Western blot analysis of galectin-4 expression in non-transfected 293T: sc-117752 (**A**), human galectin-4 transfected 293T: sc-114260 (**B**) and T84 (**C**) whole cell lysates.



galectin-4 (T-20): sc-19286. 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.

SELECT PRODUCT CITATIONS

1. Heinzelmann-Schwarz, V.A., et al. 2006. A distinct molecular profile associated with mucinous epithelial ovarian cancer. Br. J. Cancer 94: 904-913.
2. Tripodi, D., et al. 2009. Gene expression profiling in sinonasal adenocarcinoma. BMC Med. Genomics 2: 65.

PROTOCOLS

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