SANTA CRUZ BIOTECHNOLOGY, INC.

galectin-3 (H-5): sc-374253

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. The galectin-3 protein, also known as Mac-2, hMac-2, GALBP, CBP35 or LGALS3, contains a single carbohydrate binding domain, which binds galactose-containing glycoconjugates. Galectin-3 is expressed in colonic and intestinal epithelium, inflammatory macrophages, papillary and follicular carcinomas, neoplastic astrocytes and some B and T lymphocytes. Upregulated expression of galectin-3 is involved in cancer progression and metastasis. Galectin-3 mediates the endocytosis otf β1 Integrins in a lactose-dependent manner and is associated with thyroid malignancy and Crohn's disease. It may also be used as a marker for diagnosing cases involving Hurthle cell adenomas and carcinomas.

CHROMOSOMAL LOCATION

Genetic locus: LGALS3 (human) mapping to 14q22.3; Lgals3 (mouse) mapping to 14 C1.

SOURCE

galectin-3 (H-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-31 at the N-terminus of galectin-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-374253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

galectin-3 (H-5) is recommended for detection of galectin-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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-3 siRNA (h): sc-155994, galectin-3 siRNA (m): sc-35443, galectin-3 shRNA Plasmid (h): sc-155994-SH, galectin-3 shRNA Plasmid (m): sc-35443-SH, galectin-3 shRNA (h) Lentiviral Particles: sc-155994-V and galectin-3 shRNA (m) Lentiviral Particles: sc-35443-V.

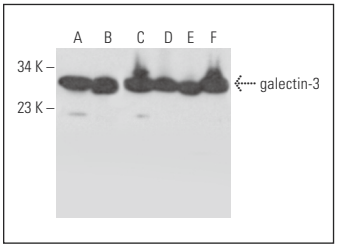
Molecular Weight of galectin-3: 31 kDa.

Positive Controls: SW480 nuclear extract: sc-2155, A-431 nuclear extract: sc-2122 or MCF7 nuclear extract: sc-2149.

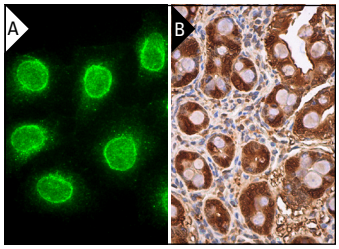
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



galectin-3 (H-5): sc-374253. Western blot analysis of galectin-3 expression in T98G (**A**) and RAW 264.7 (**B**) whole cell lysates and SW480 (**C**), A-431 (**D**), MCF7 (**E**) and WEHI-231 (**F**) nuclear extracts.



galectin-3 (H-5): sc-374253. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic and nuclear staining of glandular cells and cytoplasmic staining of endothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Song, M., et al. 2017. Aluminum trichloride inhibits the rat osteoblasts mineralization *in vitro.* Biol. Trace Elem. Res. 175: 186-193.
2. de Freitas Pedrosa, L., et al. 2020. The acid and neutral fractions of pectins isolated from ripe and overripe papayas differentially affect galectin-3 inhibition and colon cancer cell growth. Int. J. Biol. Macromol. 164: 2681-2690.
3. Marchi, P.M., et al. 2022. C9ORF72-derived poly-GA DPRs undergo endocytic uptake in iAstrocytes and spread to motor neurons. Life Sci. Alliance 5: e202101276.

STORAGE

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

CONJUGATES

See **galectin-3 (B2C10): sc-32790** for galectin-3 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.