SANTA CRUZ BIOTECHNOLOGY, INC.

galectin-3 (H-160): sc-20157

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. Galectin-3, also known as Mac-2, hMac-2, GALBP, CBP35, or LGALS3 maps to human chromosome 14q21-q22 and encodes a 30-35 kDa protein. The Galectin-3 protein 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 of beta-1 integrins in a lactose-dependant manner and is associated with thyroid malignancy and Crohn's disease. Galectin-3 may also be used as a marker for diagnosing cases involving Hurthle cell adenomas and carcinomas.

REFERENCES

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2. Couraud, P.O., et al. 1989. Molecular cloning, characterization, and expression of a human 14-kDa lectin. J. Biol. Chem. 264: 1310-1316.
3. Cherayil, B.J., et al. 1990. Molecular cloning of a human macrophage lectin specific for galactose. Proc. Natl. Acad. Sci. USA 87: 7324-7338.
4. Lotz, M.M., et al. 1993. Decreased expression of Mac-2 (carbohydrate binding protein 35) and loss of its nuclear localization are associated with the neoplastic progression of colon carcinoma. Proc. Natl. Acad. Sci. USA 90: 3466-3470.
5. Huflejt, M.E., et al. 1997. Strikingly different localization of galectin-3 and galectin-4 in human colon adenocarcinoma T84 cells. Galectin-4 is localized at sites of cell adhesion. J. Biol. Chem. 272: 14294-14303.
6. Shimonishi, T., et al. 2001. Expression of endogenous galectin-1 and galectin-3 in intrahepatic cholangiocarcinoma. Hum. Pathol. 32: 302-310.
7. Guittaut, M., et al. 2001. Identification of an internal gene to the human Galectin-3. J. Biol. Chem. 276: 2652-2667.

CHROMOSOMAL LOCATION

Genetic locus: LGALS3 (human) mapping to 14q21-q22; Lgals3 (mouse) mapping to 14 C1.

SOURCE

galectin-3 (H-160) is a rabbit polyclonal antibody raised against amino acids 1-160 mapping at the N-terminus of galectin-3 of human origin.

PRODUCT

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

Available as agarose conjugate for immunoprecipitation, sc-20157 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

galectin-3 (H-160) is recommended for detection of galectin-3 of mouse, rat and 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for galectin-3 siRNA (h): sc-35442 and galectin-3 siRNA (m): sc-35443.

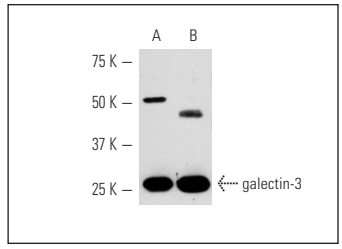
Molecular Weight of galectin-3: 31 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

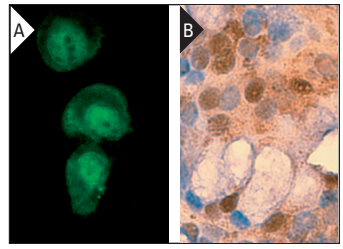
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



galectin-3 (H-160): sc-20157. Western blot analysis of galectin-3 expression in HeLa (**A**) and MCF7 (**B**) nuclear extracts.



galectin-3 (H-160): sc-20157. Immunofluorescence staining of methanol-fixed RAW 264.7 cells (**A**) and immunoperoxidase staining of formalin fixed, paraffin-embedded mouse colon tissue (**B**) showing nuclear and 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.