

galectin-3 (M3/38): sc-23938

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 of β 1 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 (M3/38) is a rat monoclonal antibody raised against galectin-3 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

galectin-3 (M3/38) is available conjugated to agarose (sc-23938 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-23938 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-23938 PE), fluorescein (sc-23938 FITC), Alexa Fluor[®] 488 (sc-23938 AF488), Alexa Fluor[®] 546 (sc-23938 AF546), Alexa Fluor[®] 594 (sc-23938 AF594) or Alexa Fluor[®] 647 (sc-23938 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-23938 AF680) or Alexa Fluor[®] 790 (sc-23938 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

galectin-3 (M3/38) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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-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.

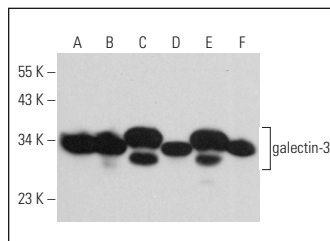
Molecular Weight of galectin-3: 31 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A-375 cell lysate: sc-3811 or NIH/3T3 whole cell lysate: sc-2210.

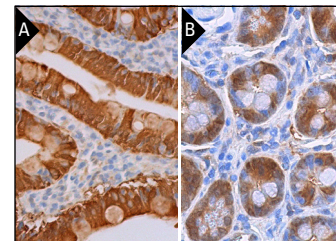
STORAGE

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

DATA



galectin-3 (M3/38): sc-23938. Western blot analysis of galectin-3 expression in SW480 nuclear extract (A) and A-375 (B), NIH/3T3 (C), T98G (D), WEHI-231 (E) and MCF7 (F) whole cell lysates.



galectin-3 (M3/38): sc-23938. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum (A) and human colon (B) tissue showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

- Matarrese, P., et al. 2000. Galectin-3 overexpression protects from apoptosis by improving cell adhesion properties. *Int. J. Cancer* 85: 545-554.
- Saravanan, C., et al. 2009. Galectin-3 promotes lamellipodia formation in epithelial cells by interacting with complex N-glycans on α 3 β 1 Integrin. *J. Cell Sci.* 122: 3684-3693.
- Schneider D, et al. 2010. Trafficking of galectin-3 through endosomal organelles of polarized and non-polarized cells. *Eur. J. Cell Biol.* 89: 788-798.
- Darrow, A.L., et al. 2011. Transcriptional analysis of the endothelial response to diabetes reveals a role for galectin-3. *Physiol. Genomics* 43: 1144-1152.
- Reales-Calderón J.A., et al. 2012. Sub-proteomic study on macrophage response to *Candida albicans* unravels new proteins involved in the host defense against the fungus. *J. Proteomics* 75: 4734-4746.
- Dovizio, M., et al. 2013. Pharmacological inhibition of platelet-tumor cell cross-talk prevents platelet-induced overexpression of cyclooxygenase-2 in HT29 human colon carcinoma cells. *Mol. Pharmacol.* 84: 25-40.
- Abreu-Vieira, G., et al. 2015. Cidea improves the metabolic profile through expansion of adipose tissue. *Nat. Commun.* 6: 7433.
- Fritsch, K., et al. 2016. Galectin-3 interacts with components of the nuclear ribonucleoprotein complex. *BMC Cancer* 16: 502.
- Lu, S.L., et al. 2017. Endothelial cells are intrinsically defective in xenophagy of *Streptococcus pyogenes*. *PLoS Pathog.* 13: e1006444.
- Seo, S.U., et al. 2018. mTORC1/2 inhibitor and curcumin induce apoptosis through lysosomal membrane permeabilization-mediated autophagy. *Oncogene* 37: 5205-5220.

RESEARCH USE

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

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