

galectin-3 (A3A12): sc-53127

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 (A3A12) is a mouse monoclonal antibody raised against full length galectin-3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

galectin-3 (A3A12) is available conjugated to agarose (sc-53127 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53127 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53127 PE), fluorescein (sc-53127 FITC), Alexa Fluor® 488 (sc-53127 AF488), Alexa Fluor® 546 (sc-53127 AF546), Alexa Fluor® 594 (sc-53127 AF594) or Alexa Fluor® 647 (sc-53127 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-53127 AF680) or Alexa Fluor® 790 (sc-53127 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

galectin-3 (A3A12) 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

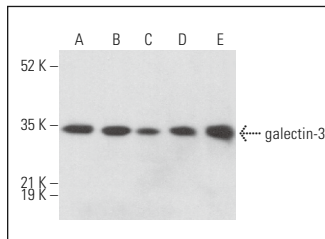
Suitable for use as control antibody for galectin-3 siRNA (h): sc-155994, galectin-3 siRNA (m): sc-35443, galectin-3 shRNA Plasmid (h): sc-155994-SH, galectin-3 shRNA Plasmid (m): sc-35443-SH, galectin-3 shRNA (h) Lentiviral Particles: sc-155994-V and galectin-3 shRNA (m) Lentiviral Particles: sc-35443-V.

Molecular Weight of galectin-3: 31 kDa.

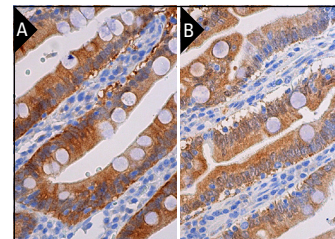
STORAGE

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

DATA



galectin-3 (A3A12): sc-53127. Western blot analysis of galectin-3 expression in HeLa (A) and SW480 (B) nuclear extracts and A-431 (C), MCF7 (D) and HeLa (E) whole cell lysates. Detection reagent used: m-IgGκ-BP-HRP: sc-516102.



galectin-3 (A3A12): sc-53127. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum (A) and human small intestine (B) tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Straube, T., et al. 2011. Changes in the expression and subcellular distribution of galectin-3 in clear cell renal cell carcinoma. *J. Exp. Clin. Cancer Res.* 30: 89.
2. Gao, X., et al. 2012. The two endocytic pathways mediated by the carbohydrate recognition domain and regulated by the collagen-like domain of galectin-3 in vascular endothelial cells. *PLoS ONE* 7: e52430.
3. Kiyota, M., et al. 2013. FTY720 induces apoptosis of chronic myelogenous leukemia cells via dual activation of BIM and BID and overcomes various types of resistance to tyrosine kinase inhibitors. *Apoptosis* 18: 1437-1446.
4. Hoja-Lukowicz, D., et al. 2014. The lectin-binding pattern of nucleolin and its interaction with endogenous galectin-3. *Cell. Mol. Biol. Lett.* 19: 461-482.
5. Fritsch, K., et al. 2016. Galectin-3 interacts with components of the nuclear ribonucleoprotein complex. *BMC Cancer* 16: 502.
6. Zhang, Z., et al. 2018. CD146 interacts with galectin-3 to mediate endothelial cell migration. *FEBS Lett.* 592: 1817-1828.
7. Zhu, X., et al. 2019. Potential injurious effects of the fine particulate PM2.5 on the progression of atherosclerosis in apoE-deficient mice by activating platelets and leukocytes. *Arch. Med. Sci.* 15: 250-261.
8. Kanlaya, R., et al. 2022. Persistent *Escherichia coli* infection in renal tubular cells enhances calcium oxalate crystal-cell adhesion by inducing ezrin translocation to apical membranes via Rho/ROCK pathway. *Cell. Mol. Life Sci.* 79: 381.
9. Kamikubo, Y., et al. 2022. *Ex vivo* analysis platforms for monitoring amyloid precursor protein cleavage. *Front. Mol. Neurosci.* 15: 1068990.

RESEARCH USE

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

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