SANTA CRUZ BIOTECHNOLOGY, INC.

galectin-3 (A3A12): sc-53127

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 of 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 (A3A12) is a mouse monoclonal antibody raised against full length 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.

galectin-3 (A3A12) is available conjugated to agarose (sc-53127 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53127 HRP), 200 µg/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 µg/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 µg/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 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), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

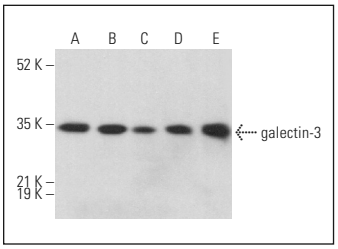
Suitable for use as control antibody for galectin-3 siRNA (h): sc-155994, galectin-3 siRNA (m): sc-35443, galectin-3 shRNA Plasmid (h): sc-155994-SH, galectin-3 shRNA Plasmid (m): sc-35443-SH, galectin-3 shRNA (h) Lentiviral Particles: sc-155994-V and galectin-3 shRNA (m) Lentiviral Particles: sc-35443-V.

Molecular Weight of galectin-3: 31 kDa.

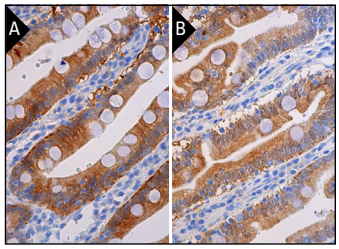
STORAGE

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-Łukowicz, 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. Tang, M.R., et al. 2018. Identification of CD24 as a marker for tumorigenesis of melanoma. Onco Targets Ther. 11: 3401-3406.
7. Zhang, Z., et al. 2018. CD146 interacts with galectin-3 to mediate endothelial cell migration. FEBS Lett. 592: 1817-1828.
8. 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.
9. 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.

RESEARCH USE

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