

galectin-3 (B2C10): sc-32790

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 (B2C10) is a mouse monoclonal antibody raised against recombinant galectin-3 of human origin with an epitope mapping within the first 18 amino acids.

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. Also available azide-free for neutralizing, sc-32790 L, 200 μ g/0.1 ml.

galectin-3 (B2C10) is available conjugated to agarose (sc-32790 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32790 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32790 PE), fluorescein (sc-32790 FITC), Alexa Fluor[®] 488 (sc-32790 AF488), Alexa Fluor[®] 546 (sc-32790 AF546), Alexa Fluor[®] 594 (sc-32790 AF594) or Alexa Fluor[®] 647 (sc-32790 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-32790 AF680) or Alexa Fluor[®] 790 (sc-32790 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

galectin-3 (B2C10) 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 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) and flow cytometry (1 μ g per 1 x 10⁶ cells).

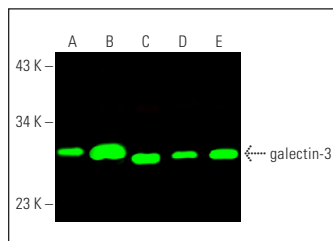
Suitable for use as control antibody for galectin-3 siRNA (h): sc-155994, galectin-3 siRNA (m): sc-35443, galectin-3 shRNA Plasmid (h): sc-155994-SH, galectin-3 shRNA Plasmid (m): sc-35443-SH, galectin-3 shRNA (h) Lentiviral Particles: sc-155994-V and galectin-3 shRNA (m) Lentiviral Particles: sc-35443-V.

Molecular Weight of galectin-3: 31 kDa.

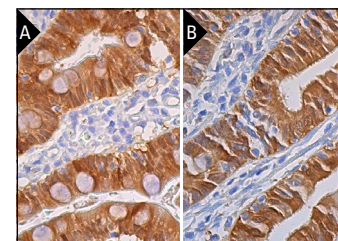
STORAGE

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

DATA



galectin-3 (B2C10) Alexa Fluor[®] 680: sc-32790 AF680. Direct near-infrared western blot analysis of galectin-3 expression in RAW 264.7 (A), A-431 (B), HeLa (C) and MCF7 (D) whole cell lysates and HeLa nuclear extract (E). Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



galectin-3 (B2C10): sc-32790. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue (A) and human small intestine tissue (B) showing cytoplasmic and nuclear staining of glandular cells.

SELECT PRODUCT CITATIONS

- Breuilh, L., et al. 2007. galectin-3 modulates immune and inflammatory responses during helminthic infection: impact of galectin-3 deficiency on the functions of dendritic cells. *Infect. Immun.* 75: 5148-5157.
- Lee, H.J., et al. 2018. A selective cyclin-dependent kinase 4, 6 dual inhibitor, Ribociclib (LEE011) inhibits cell proliferation and induces apoptosis in aggressive thyroid cancer. *Cancer Lett.* 417: 131-140.
- Hassan, A., et al. 2019. Adolescent idiopathic scoliosis associated POC5 mutation impairs cell cycle, cilia length and centrosome protein interactions. *PLoS ONE* 14: e0213269.
- Freitag, N., et al. 2020. galectin-3 deficiency in pregnancy increases the risk of fetal growth restriction (FGR) via placental insufficiency. *Cell Death Dis.* 11: 560.
- Lv, S.L., et al. 2021. Lp-PLA2 inhibition prevents Ang II-induced cardiac inflammation and fibrosis by blocking macrophage NLRP3 inflammasome activation. *Acta Pharmacol. Sin.* 42: 2016-2032.
- Günes Günsel, G., et al. 2022. The arginine methyltransferase PRMT7 promotes extravasation of monocytes resulting in tissue injury in COPD. *Nat. Commun.* 13: 1303.
- Gallagher, E.R., et al. 2023. The selective autophagy adaptor p62/SQSTM1 forms phase condensates regulated by HSP27 that facilitate the clearance of damaged lysosomes via lysophagy. *Cell Rep.* 42: 112037.
- Jeong, E., et al. 2024. TMEM55B links autophagy flux, lysosomal repair, and TFE3 activation in response to oxidative stress. *Nat. Commun.* 15: 93.

RESEARCH USE

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

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