

galectin-4 (E-2): sc-271209

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. One member of this family, galectin-4, also known as Gal-4, L36 or LGALS4, maps to human chromosome 19q13.2. The galectin-4 protein is composed of 323 amino acids and contains 2 homologous carbohydrate recognition domains (CRD) and all amino acids typically conserved in the galectin family. Expression of galectin-4 correlates with the malignant potential of human hepatocellular carcinoma (HCC) and is differentially regulated depending on cell-cell contact, serum growth factors, cell growth and cell differentiation status. Galectin-4 expression is detected in epithelial cells of the colon, rectum and intestine, and in HT29 and LS174T cell lines. Galectin-4 is under-expressed in colorectal cancer and is preferentially upregulated in cells prone to peritoneal dissemination.

REFERENCES

1. Couraud, P.O., et al. 1989. Molecular cloning, characterization, and expression of a human 14 kDa lectin. *J. Biol. Chem.* 264: 1310-1316.
2. Chiu, M.L., et al. 1994. An adherens junction protein is a member of the family of lactose-binding lectins. *J. Biol. Chem.* 269: 31770-31776.
3. Rechreche, H., et al. 1997. Cloning and expression of the mRNA of human galectin-4, an S-type lectin downregulated in colorectal cancer. *Eur. J. Biochem.* 248: 225-230.
4. Gitt, M.A., et al. 1998. Galectin-4 and galectin-6 are two closely related lectins expressed in mouse gastrointestinal tract. *J. Biol. Chem.* 273: 2954-2960.

CHROMOSOMAL LOCATION

Genetic locus: *Lgals4* (mouse) mapping to 7 A3.

SOURCE

galectin-4 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 129-187 within an internal region of galectin-4 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG γ_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

galectin-4 (E-2) is available conjugated to agarose (sc-271209 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271209 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271209 PE), fluorescein (sc-271209 FITC), Alexa Fluor® 488 (sc-271209 AF488), Alexa Fluor® 546 (sc-271209 AF546), Alexa Fluor® 594 (sc-271209 AF594) or Alexa Fluor® 647 (sc-271209 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271209 AF680) or Alexa Fluor® 790 (sc-271209 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271209 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

galectin-4 (E-2) is recommended for detection of galectin-4 of mouse 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for galectin-4 siRNA (m): sc-37428, galectin-4 shRNA Plasmid (m): sc-37428-SH and galectin-4 shRNA (m) Lentiviral Particles: sc-37428-V.

Molecular Weight of galectin-4: 36 kDa.

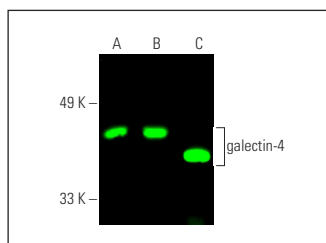
Positive Controls: mouse colon extract: sc-364238, BC₃H1 cell lysate: sc-2299 or mouse cerebellum extract: sc-2403.

RECOMMENDED SUPPORT REAGENTS

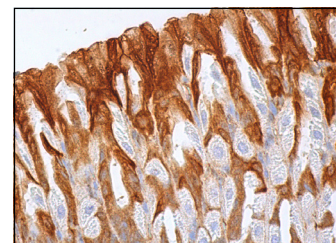
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



galectin-4 (E-2): sc-271209. Near-Infrared western blot analysis of galectin-4 expression in mouse cerebellum (A), rat cerebellum (B) and mouse colon (C) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 680: sc-516180.



galectin-4 (E-2): sc-271209. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse stomach tissue showing cytoplasmic staining of glandular cells.

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.

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