

galectin-12 (H-166): sc-67294

BACKGROUND

Galectin-12 is a 314 amino acid protein encoded by the human gene LGALS12. Galectin-12 is a member of the galectin family consisting of β -galactoside-binding proteins with conserved carbohydrate recognition domains. Galectin-12 binds lactose and may participate in the apoptosis of adipocytes. This protein is preferentially expressed in peripheral blood leukocytes and adipocytes. Galectin-12 is induced by cell cycle block at the G₁ phase and causes G₁ arrest when overexpressed. The galectin-12 gene is expressed in mouse preadipocytes and is upregulated when preadipocytes undergo cell cycle arrest, concomitant with acquisition of the competence to undergo differentiation in response to adipogenic hormone stimulation. Galectin-12 is an adipocyte-expressed protein which is downregulated by various Insulin resistance-inducing hormones. As a result, galectin-12 may play a role in the pathogenesis of Insulin resistance.

REFERENCES

1. Yang, R.Y., et al. 2001. Cell cycle regulation by galectin-12, a new member of the galectin superfamily. *J. Biol. Chem.* 276: 20252-20260.
2. Hotta, K., et al. 2001. Galectin-12, an adipose-expressed galectin-like molecule possessing apoptosis-inducing activity. *J. Biol. Chem.* 276: 34089-34097.
3. Fasshauer, M., et al. 2002. Negative regulation of adipose-expressed galectin-12 by isoproterenol, tumor necrosis factor α , Insulin and dexamethasone. *Eur. J. Endocrinol.* 147: 553-559.
4. Cooper, D.N. 2002. Galectinomics: finding themes in complexity. *Biochim. Biophys. Acta* 1572: 209-231.
5. Liu, F.T., et al. 2002. Intracellular functions of galectins. *Biochim. Biophys. Acta* 1572: 263-273.
6. Yang, R.Y. and Liu, F.T. 2003. Galectins in cell growth and apoptosis. *Cell. Mol. Life Sci.* 60: 267-276.
7. Yang, R.Y., et al. 2004. Galectin-12 is required for adipogenic signaling and adipocyte differentiation. *J. Biol. Chem.* 279: 29761-29766.
8. Harrison, W.J., et al. 2007. Expression of lipogenic factors galectin-12, resistin, SREBP-1 and SCD in human sebaceous glands and cultured sebocytes. *J. Invest. Dermatol.* 127: 1309-1317.

CHROMOSOMAL LOCATION

Genetic locus: LGALS12 (human) mapping to 11q12.3; Lgals12 (mouse) mapping to 19 A.

SOURCE

galectin-12 (H-166) is a rabbit polyclonal antibody raised against amino acids 171-336 mapping at the C-terminus of galectin-12 of human origin.

PRODUCT

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

APPLICATIONS

galectin-12 (H-166) is recommended for detection of galectin-12 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

galectin-12 (H-166) is also recommended for detection of galectin-12 in additional species, including bovine.

Suitable for use as control antibody for galectin-12 siRNA (h): sc-62362, galectin-12 siRNA (m): sc-62363, galectin-12 shRNA Plasmid (h): sc-62362-SH, galectin-12 shRNA Plasmid (m): sc-62363-SH, galectin-12 shRNA (h) Lentiviral Particles: sc-62362-V and galectin-12 shRNA (m) Lentiviral Particles: sc-62363-V.

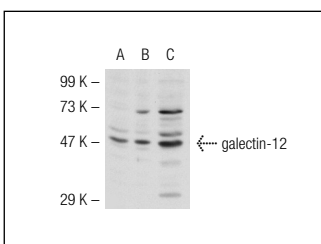
Molecular Weight of galectin-12: 35 kDa.

Positive Controls: galectin-12 (m): 293T Lysate: sc-120391, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



galectin-12 (H-166): sc-67294. Western blot analysis of galectin-12 expression in non-transfected 293T: sc-117752 (A), mouse galectin-12 transfected 293T: sc-120391 (B) and NIH/3T3 (C) whole cell lysates.

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.