



galectin-12 (K-19): sc-67580

BACKGROUND

Galectin-12, also known as galectin related inhibitor of proliferation 1 (in mouse), 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., Hsu, D.K., Yu, L., Ni, J. and Liu, F.T. 2001. Cell cycle regulation by galectin-12, a new member of the galectin superfamily. *J. Biol. Chem.* 276: 20252-20260.
2. Hotta, K., Funahashi, T., Matsukawa, Y., Takahashi, M., Nishizawa, H., Kishida, K., Matsuda, M., Kuriyama, H., Kihara, S., Nakamura, T., Tochino, Y., Bodkin, N.L., Hansen, B.C. and Matsuzawa, Y. 2001. Galectin-12, an adipose-expressed galectin-like molecule possessing apoptosis-inducing activity. *J. Biol. Chem.* 276: 34089-34097.
3. Fasshauer, M., Klein, J., Lossner, U. and Paschke, R. 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., Patterson, R.J. and Wang, J.L. 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., Hsu, D.K., Yu, L., Chen, H.Y. and Liu, F.T. 2004. Galectin-12 is required for adipogenic signaling and adipocyte differentiation. *J. Biol. Chem.* 279: 29761-29766.
8. Harrison, W.J., Bull, J.J., Seltmann, H., Zouboulis, C.C. and Philpott, M.P. 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 (mouse) mapping to 19 A.

SOURCE

galectin-12 (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of galectin-12 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-67580 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

galectin-12 (K-19) is recommended for detection of galectin-12 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for galectin-12 siRNA (m): sc-62363.

Molecular Weight of galectin-12: 35 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.