

# LTBP-1 (H-140): sc-98275

## BACKGROUND

Latent transforming growth factor- $\beta$  1 binding protein 1 (LTBP-1), a heavy glycoprotein, is part of the platelet-derived TGF $\beta$ 1 complex. LTBP-1 serves as an anchor for latent TGF $\beta$  in the extracellular matrix and is a component of microfibrillar structures. Cleavage of LTBP results in LTBP-1, which may sequester latent TGF $\beta$  in the extracellular matrix and regulate its activation. LTBP-1 mRNA is enriched in ovarian carcinoma tissues and highly expressed in serous and mucinous adenocarcinomas.

## REFERENCES

1. Kanzaki, T., et al. 1990. TGF $\beta$ 1 binding protein: a component of the large latent complex of TGF $\beta$ 1 with multiple repeat sequences. *Cell* 61: 1051-1061.
2. Olofsson, A., et al. 1995. Efficient association of an amino-terminally extended form of human latent transforming growth factor- $\beta$  binding protein with the extracellular matrix. *J. Biol. Chem.* 270: 31294-31297.
3. Saharinen, J., et al. 1999. Latent transforming growth factor- $\beta$  binding proteins (LTBPs)—structural extracellular matrix proteins for targeting TGF- $\beta$  action. *Cytokine Growth Factor Rev.* 10: 99-117.
4. Gualandris, A., et al. 2000. The latent transforming growth factor- $\beta$  binding protein-1 promotes *in vitro* differentiation of embryonic stem cells into endothelium. *Mol. Cell. Biol.* 11: 4295-4308.
5. Breitkopf, K., et al. 2001. Expression and matrix deposition of latent transforming growth factor- $\beta$  binding proteins in normal and fibrotic rat liver and transdifferentiating hepatic stellate cells in culture. *Hepatology* 33: 387-396.
6. Higashi, T., et al. 2001. Overexpression of latent transforming growth factor- $\beta$ 1 (TGF $\beta$ 1) binding protein 1 (LTBP-) in association with TGF $\beta$ 1 in ovarian carcinomas. *Jpn. J. Cancer Res.* 92: 506-515.
7. Isogai, Z., et al. 2003. Latent transforming growth factor- $\beta$  binding protein 1 interacts with fibrillin and is a microfibril-associated protein. *J. Biol. Chem.* 278: 2750-2757.
8. SWISS-PROT/TrEMBL (Q14766). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: LTBP1 (human) mapping to 2p22.3; Ltbp1 (mouse) mapping to 17 E2.

## SOURCE

LTBP-1 (H-140) is a rabbit polyclonal antibody raised against amino acids 601-740 mapping within an internal region of LTBP-1 of human origin.

## PRODUCT

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

## RESEARCH USE

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

## APPLICATIONS

LTBP-1 (H-140) is recommended for detection of LTBP-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

LTBP-1 (H-140) is also recommended for detection of LTBP-1 in additional species, including equine and canine.

Suitable for use as control antibody for LTBP-1 siRNA (h): sc-45454, LTBP-1 siRNA (m): sc-45455, LTBP-1 shRNA Plasmid (h): sc-45454-SH, LTBP-1 shRNA Plasmid (m): sc-45455-SH, LTBP-1 shRNA (h) Lentiviral Particles: sc-45454-V and LTBP-1 shRNA (m) Lentiviral Particles: sc-45455-V.

Molecular Weight of LTBP-1: 240 kDa.

Positive Controls: human platelet whole cell lysate: sc-363773.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Leppäranta, O., et al. 2012. Regulation of TGF- $\beta$  storage and activation in the human idiopathic pulmonary fibrosis lung. *Cell Tissue Res.* 348: 491-503.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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