SANTA CRUZ BIOTECHNOLOGY, INC.

LTBP-2 (E-18): sc-18343

BACKGROUND

Transforming growth factor (TGF)-β is secreted as a part of an inactive complex that frequently contains latent TGF-β-binding protein (LTBP). The LTBP family of proteins exhibit a multidomain structure containing cysteine-rich motifs. LTBP-2 is an integral component of elastin-containing microfibrils and contains 20 EGF-like repeats and four copies of an 8-cysteine repeat. LTBP-2 is synthesized as a 240 kDa protein by human foreskin fibroblasts. LTBP-2 co-localizes with tropoelastin in several tissues, including lung, dermis, epicardium, pericardium and heart valves throughout rodent development, and in the spleen in the young adult mouse. Pseudoexfoliation (PEX) syndrome is a systemic condition characterized by the pathologic production and accumulation of an abnormal fibrillar extracellular material in many intra- and extraocular tissues. The co-localization of LTBP-1 and LTBP-2 with latent TGF-β1 and with fibrillin-1 on PEX fibrils suggests a possible mechanism for the regulation of TGF-β1 activity in PEX eyes. The LTBP-2 gene maps to human chromosome 14q24.

REFERENCES

1. Moren, A., Olofsson, A., Stenman, G., Sahlin, P., Kanzaki, T., Claesson-Welsh, L., ten Dijke, P., Miyazono, K. and Heldin, C.H. 1994. Identification and characterization of LTBP-2, a novel latent transforming growth factor-beta-binding protein J. Biol. Chem. 269: 32469-32478.
2. Bashir, M.M., Han, M.D., Abrams, W.R., Tucker, T., Ma, R.I., Gibson, M., Ritty, T., Mecham, R. and Rosenbloom, J. 1996. Analysis of the human gene encoding latent transforming growth factor-beta-binding protein-2. Int. J. Biochem. Cell Biol. 28: 531-542.
3. Shipley, J.M., Mecham, R.P., Maus, E., Jeffrey, B., Rosenbloom, J., McCarthy, R.T., Baumann, M.L., Frankfater, C., Segade, F. and Shapiro, S. 2000. Developmental expression of latent transforming growth factor β binding protein 2 and its requirement early in mouse development. Mol. Cell. Biol. 20: 4879-4887.
4. Schlotzer-Schrehardt, U., Zenkel, M., Kuchle, M., Sakai, L.Y. and Naumann, G.O. 2001. Role of transforming growth factor-beta1 and its latent form binding protein in pseudoexfoliation syndrome. Exp. Eye Res. 73: 765-780.
5. Sinha, S., Heagerty, A.M., Shuttleworth, C.A. and Kielty, C.M. 2002. Expression of latent TGF-beta binding proteins and association with TGF-beta1 and fibrillin-1 following arterial injury. Cardiovasc. Res. 53: 971-983.

CHROMOSOMAL LOCATION

Genetic locus: Ltbp2 (mouse) mapping to 12 D1.

SOURCE

LTBP-2 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LTBP-2 of mouse origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-18343 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LTBP-2 (E-18) is recommended for detection of LTBP-2 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 LTBP-2 siRNA (m): sc-43389, LTBP-2 shRNA Plasmid (m): sc-43389-SH and LTBP-2 shRNA (m) Lentiviral Particles: sc-43389-V.

Molecular Weight of LTBP-2: 240 kDa.

Positive Controls: AMJ2-C8 whole cell lysate.

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.

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.