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# LTBP-4 shRNA (h) Lentiviral Particles: sc-45861-V

## BACKGROUND

LTBP-4 (latent TGF $\beta$ -binding protein 4) is a structural component of connective tissue microfibrils which acts as a local regulator of TGF $\beta$  tissue deposition and signaling. LTBP-4 exists in at least four different forms, due to alternative splicing at the amino-terminus and at the central epidermal growth factor repeat domain. LTBP-4 mRNA is present in heart, aorta, uterus and small intestine. The gene encoding human LTBP-4 localizes to chromosomal position 19q13.2.

## REFERENCES

- Giltay, R., et al. 1997. Sequence and expression of a novel member (LTBP-4) of the family of latent transforming growth factor- $\beta$  binding proteins. *FEBS Lett* 411: 164-168.
- Saharinen, J., et al. 1998. Identification and characterization of a new latent transforming growth factor- $\beta$ -binding protein, LTBP-4. *J. Biol. Chem* 273: 18459-18469.
- Koli, K., et al. 2001. Novel non-TGF $\beta$ -binding splice variant of LTBP-4 in human cells and tissues provides means to decrease TGF $\beta$  deposition. *J. Cell Sci* 114: 2869-2878.
- Mangasser-Stephan, K., et al. 2001. Expression of isoforms and splice variants of the latent transforming growth factor  $\beta$  binding protein (LTBP) in cultured human liver myofibroblasts. *Liver* 21: 105-113.
- Penttinen, C., et al. 2002. Secretion of human latent TGF $\beta$ -binding protein-3 (LTBP-3) is dependent on co-expression of TGF $\beta$ . *J. Cell Sci.* 115: 3457-3468.
- Sterner-Kock, A., et al. 2002. Disruption of the gene encoding the latent transforming growth factor- $\beta$  binding protein 4 (LTBP-4) causes abnormal lung development, cardiomyopathy, and colorectal cancer. *Genes Dev.* 17: 2264-2273.
- Koli, K., et al. 2004. Disruption of LTBP-4 function reduces TGF $\beta$  activation and enhances BMP-4 signaling in the lung. *J. Cell Biol* 167: 123-133.
- Chen, Y., et al. 2005. Amino acid requirements for formation of the TGF $\beta$ -latent TGF $\beta$  binding protein complexes. *J. Mol. Biol* 345: 175-186.

## CHROMOSOMAL LOCATION

Genetic locus: LTBP4 (human) mapping to 19q13.2.

## PRODUCT

LTBP-4 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200  $\mu$ l frozen stock containing  $1.0 \times 10^6$  infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see LTBP-4 siRNA (h): sc-45861 and LTBP-4 shRNA Plasmid (h): sc-45861-SH as alternate gene silencing products.

## PROTOCOLS

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

## APPLICATIONS

LTBP-4 shRNA (h) Lentiviral Particles is recommended for the inhibition of LTBP-4 expression in human cells.

## SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200  $\mu$ l frozen viral stock containing  $1.0 \times 10^6$  infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

## GENE EXPRESSION MONITORING

LTBP-4 (A-2): sc-393666 is recommended as a control antibody for monitoring of LTBP-4 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgM-HRP: sc-2064 (dilution range: 1:500-1:5,000), TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgM-FITC: sc-2082 (dilution range: 1:100-1:400) or goat anti-mouse IgM-TR: sc-2983 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LTBP-4 gene expression knockdown using RT-PCR Primer: LTBP-4 (h)-PR: sc-45861-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

## STORAGE

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

## RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.