SANTA CRUZ BIOTECHNOLOGY, INC.

LTBP-3 siRNA (h): sc-106921

BACKGROUND

LTBP-3 (latent TGFβ-binding protein 3) is a structural component of connective tissue microfibrils that plays an essential role in TGFβ1 secretion and targeting. LTBP-3 is present at high levels in human heart, skeletal muscle, prostate and ovaries and in certain osteosarcoma and fibroblastic cell lines. Human LTBP-3 localizes to chromosome position 11q13.1.

REFERENCES

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2. Yin, W., Smiley, E. and Bonadio, J. 1998. Alternative splicing of LTBP-3. Biochem. Biophys. Res. Commun. 245: 454-458.
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5. Chen, Y., Dabovic, B., Annes, J.P. and Rifkin, D.B. 2002. Latent TGFβ binding protein-3 (LTBP-3) requires binding to TGFβ for secretion. FEBS Lett. 517: 277-280.
6. Chen, Y., Dabovic, B., Colarossi, C., Santori, F.R., Lilic, M., Vukmanovic, S. and Rifkin, D.B. 2003. Growth retardation as well as spleen and thymus involution in latent TGFβ binding protein LTBP-3 null mice. J. Cell Physiol. 196: 319-325.
7. Kantola, A.K., Keski-Oja, J. and Koli, K. 2005. Induction of human LTBP-3 promoter activity by TGFβ1 is mediated by Smad3/4 and AP-1 binding elements. Gene 363: 142-150.
8. Colarossi, C., Chen, Y., Obata, H., Jurukovski, V., Fontana, L., Dabovic, B. and Rifkin, D.B. 2005. Lung alveolar septation defects in LTBP-3-null mice. Am. J. Pathol. 167: 419-428.
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CHROMOSOMAL LOCATION

Genetic locus: LTBP3 (human) mapping to 11q13.1.

PRODUCT

LTBP-3 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LTBP-3 shRNA Plasmid (h): sc-106921-SH and LTBP-3 shRNA (h) Lentiviral Particles: sc-106921-V as alternate gene silencing products.

For independent verification of LTBP-3 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-106921A, sc-106921B and sc-106921C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

LTBP-3 siRNA (h) is recommended for the inhibition of LTBP-3 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

LTBP-3 (H-11): sc-390913 is recommended as a control antibody for monitoring of LTBP-3 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 reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LTBP-3 gene expression knockdown using RT-PCR Primer: LTBP-3 (h)-PR: sc-106921-PR (20 µl, 430 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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