SANTA CRUZ BIOTECHNOLOGY, INC.

LBP1 siRNA (m): sc-75414

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The Power to Question

BACKGROUND

LBP1 (Upstream-binding protein 1), also designated UBP1, LBP1A or LBP1B, is a 540 amino acid protein that belongs to the grh/CP2 family (grainyhead transcription factor family). LBP1 is a transcriptional activator that regulates the placental expression of CYP11A1 and activates the Hemoglobin globin promoter in erythroid cells. LBP1 is responsible for repressing transcription of HIV-1 by binding to and preventing TFIID from interacting with its promoter region. Null expression of LBP1 causes uterine growth retardation in mice embryos suggesting a critical role in extraembryonic angiogenesis. LBP1 localizes to the nucleus and is expressed in adrenal tissue, Hep G2, JEG-3, and HeLa cell lines. It forms two natural variants by alternative splicing. LBP1 can form homodimers as well as heterodimers with LBP-9. LBP-9 suppresses the expression of LBP1.

REFERENCES

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3. Parekh, V., et al. 2004. Defective extraembryonic angiogenesis in mice lacking LBP-1a, a member of the grainyhead family of transcription factors. Mol. Cell. Biol. 24: 7113-7129.
4. Huang, N. and Miller, W.L. 2005. LBP proteins modulate SF1-independent expression of P450scc in human placental JEG-3 cells. Mol. Endocrinol. 19: 409-420.
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CHROMOSOMAL LOCATION

Genetic locus: Ubp1 (mouse) mapping to 9 F3.

PRODUCT

LBP1 siRNA (m) 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 LBP1 shRNA Plasmid (m): sc-75414-SH and LBP1 shRNA (m) Lentiviral Particles: sc-75414-V as alternate gene silencing products.

For independent verification of LBP1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75414A, sc-75414B and sc-75414C.

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

LBP1 siRNA (m) is recommended for the inhibition of LBP1 expression in mouse 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LBP1 gene expression knockdown using RT-PCR Primer: LBP1 (m)-PR: sc-75414-PR (20 µl). 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.

PROTOCOLS

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