SANTA CRUZ BIOTECHNOLOGY, INC.

# LBP-1C siRNA (m): sc-146663

## BACKGROUND

LBP-1C, also known as TFCP2 (transcription factor CP2), CP2, LSF, SEF or TFCP2C, is a 502 amino acid nuclear protein that belongs to the GRH/CP2 family. Expressed ubiquitously with highest expression in spleen, brain, ovary, kidney, liver, thymus, heart and lung, LBP-1C binds to the promotors of several genes, such as those encoding Fibrinogen, Hemoglobin α and the viral HIV-1 protein and, via this interaction, plays a role in transcription. Specifically, LBP-1C functions as part of the stage selector protein (SSP) complex where it binds DNA as a dimer and facilitates the interaction of enhancer elements with target promoters, thereby activating transcription. Defects in the gene encoding LBP-1C may be associated with Alzheimer's disease, depression and Purkinje cell degeneration. LBP-1C is expressed as two isoforms due to alternative splicing events.

## REFERENCES


1. Swendeman, S.L., et al. 1994. Characterization of the genomic structure, chromosomal location, promoter, and development expression of the α-globin transcription factor CP2. J. Biol. Chem. 269: 11663-11671.
2. Cunningham, J.M., et al. 1995. The human transcription factor CP2 (TFCP2), a component of the human γ-globin stage selector protein, maps to chromosome region 12q13 and is within 250 kb of the NF-E2 gene. Genomics 30: 398-399.
3. Lambert, J.C., et al. 2000. The transcriptional factor LBP-1c/CP2/LSF gene on chromosome 12 is a genetic determinant of Alzheimer's disease. Hum. Mol. Genet. 9: 2275-2280.
4. Taylor, A.E., et al. 2001. Genetic association of an LBP-1c/CP2/LSF gene polymorphism with late onset Alzheimer's disease. J. Med. Genet. 38: 232-233.
5. Bertram, L., et al. 2005. Further evidence for LBP-1c/CP2/LSF association in Alzheimer's disease families. J. Med. Genet. 42: 857-862.
6. Lim, J., et al. 2006. A protein-protein interaction network for human inherited ataxias and disorders of Purkinje cell degeneration. Cell 125: 801-814.
7. Schahab, S., et al. 2006. Association of polymorphism in the transcription factor LBP-1c/CP2/LSF gene with Alzheimer's disease and major depression. Dement. Geriatr. Cogn. Disord. 22: 95-98.
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## CHROMOSOMAL LOCATION

Genetic locus: Tfcp2 (mouse) mapping to 15 F1.

## PRODUCT

LBP-1C siRNA (m) is a target-specific 19-25 nt siRNA 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 LBP-1C shRNA Plasmid (m): sc-146663-SH and LBP-1C shRNA (m) Lentiviral Particles: sc-146663-V as alternate gene silencing products.

## 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

LBP-1C siRNA (m) is recommended for the inhibition of LBP-1C 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.

## GENE EXPRESSION MONITORING

LBP-1C (14): sc-135970 is recommended as a control antibody for monitoring of LBP-1C 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 LBP-1C gene expression knockdown using RT-PCR Primer: LBP-1C (m)-PR: sc-146663-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.