



SETBP1 siRNA (h): sc-76486

BACKGROUND

SETBP1 (SET binding protein 1), also known as SEB, is a 1,542 amino acid nuclear protein that contains three AT hook DNA-binding domains, one SKI homology region and a C-terminal SET-binding domain, which is followed by three PPLPPPP repeats. SETBP1 may be involved in SET-related tumorigenesis and leukemogenesis by regulating the transforming activity of SKI in the nucleus or suppressing SET function. As a widely expressed protein, SETBP1 is encoded by a gene that maps to human chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

REFERENCES

1. Carstea, E.D., et al. 1993. Linkage of Niemann-Pick disease type C to human chromosome 18. *Proc. Natl. Acad. Sci. USA* 90: 2002-2004.
2. Ishikawa, K., et al. 1997. Prediction of the coding sequences of unidentified human genes. VIII. 78 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 4: 307-313.
3. Minakuchi, M., et al. 2001. Identification and characterization of SEB, a novel protein that binds to the acute undifferentiated leukemia-associated protein SET. *Eur. J. Biochem.* 268: 1340-1351.
4. Petek, E., et al. 2003. Characterisation of a 19-year-old "long-term survivor" with Edwards syndrome. *Genet. Couns.* 14: 239-244.
5. Ott, M.G., et al. 2006. Correction of X-linked chronic granulomatous disease by gene therapy, augmented by insertional activation of MDS1-EVI1, PRDM16 or SETBP1. *Nat. Med.* 12: 401-409.
6. Aurizi, C., et al. 2007. Heterogeneity of mutations in the ferrochelatase gene in Italian patients with erythropoietic protoporphyria. *Mol. Genet. Metab.* 90: 402-407.
7. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611060. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: SETBP1 (human) mapping to 18q12.3.

PRODUCT

SETBP1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SETBP1 shRNA Plasmid (h): sc-76486-SH and SETBP1 shRNA (h) Lentiviral Particles: sc-76486-V as alternate gene silencing products.

For independent verification of SETBP1 (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-76486A, sc-76486B and sc-76486C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SETBP1 siRNA (h) is recommended for the inhibition of SETBP1 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 μ M in 66 μ l. 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 SETBP1 gene expression knockdown using RT-PCR Primer: SETBP1 (h)-PR: sc-76486-PR (20 μ l, 550 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.

PROTOCOLS

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