SANTA CRUZ BIOTECHNOLOGY, INC.

NNT-1/BSF-3 siRNA (h): sc-39685

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Neurotrophin-1/B cell-stimulating factor-3 (NNT-1/BSF-3), also known as cardiotrophin-like cytokine, is found mainly in lymph nodes and spleen. NNT-1/BSF-3 induces tyrosine phosphorylation of the signal transducing receptor molecule glycoprotein 130 (gp130), leukemia inhibitory factor receptor β, and signal transducer and activator of transcription 3 in the SK-N-MC human neuroblastoma cells. The activation of gp130 distinguishes a group of cytokines referred to as the IL-6 family. They all show the conserved location of one intron in their gene structure and, in common with cytokines of the hematopoietin superfamily, the presence of a four-helix bundle in their protein structure. In addition to features typical of IL-6 family cytokines, including neurotropic effects, NNT-1/BSF-3 shows B cell-stimulating capability.

REFERENCES

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2. Kishimoto, T., Akira, S., Narazaki, M. and Taga, T. 1995. Interleukin-6 family of cytokines and gp130. Blood 86: 1243-1254.
3. Taga, T. and Kishimoto, T. 1997. Gp130 and the interleukin-6 family of cytokines. Annu. Rev. Immunol. 15: 797-819.
4. Grotzinger, J., Kurapkat, G., Wollmer, A., Kalai, M. and Rose-John, S. 1997. The family of the IL-6-type cytokines: specificity and promiscuity of the receptor complexes. Proteins 27: 96-109.
5. Varnum, B.C., Sarmiento, U., Starnes, C., Lile, J., Scully, S., Guo, J., Elliott, G., McNinch, J., Shaklee, C.L., Freeman, D., Manu, F., Simonet, W.S., Boone, T. and Chang, M.S. 1999. Novel neurotrophin-1/B cell-stimulating factor-3: a cytokine of the IL-6 family. Proc. Natl. Acad. Sci. USA 96: 11458-11463.

CHROMOSOMAL LOCATION

Genetic locus: CLCF1 (human) mapping to 11q13.2.

PRODUCT

NNT-1/BSF-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 NNT-1/BSF-3 shRNA Plasmid (h): sc-39685-SH and NNT-1/BSF-3 shRNA (h) Lentiviral Particles: sc-39685-V as alternate gene silencing products.

For independent verification of NNT-1/BSF-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-39685A, sc-39685B and sc-39685C.

PROTOCOLS

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

NNT-1/BSF-3 siRNA (h) is recommended for the inhibition of NNT-1/BSF-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

NNT-1/BSF-3 (985-1): sc-74243 is recommended as a control antibody for monitoring of NNT-1/BSF-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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NNT-1/BSF-3 gene expression knockdown using RT-PCR Primer: NNT-1/BSF-3 (h)-PR: sc-39685-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.