

NTT4 siRNA (m): sc-150088

BACKGROUND

NTT4, also known as SLC6A17, is a 727 amino acid multi-pass membrane protein that belongs to the sodium:neurotransmitter symporter (SNF) family and the SLC6A17 subfamily. While it functions as a sodium-dependent vesicular transporter selective for proline, glycine, leucine and alanine, NTT4 does not, in contrast to its family members, appear to be chloride-dependent. The gene that encodes NTT4 consists of approximately 51,717 bases and maps to human chromosome 1p13.3. Comprising nearly 8% of the human genome, chromosome 1 spans 260 million base pairs, contains over 3,000 genes and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

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2. Tayebi, N., et al. 2001. Gaucher disease and parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
3. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. *Eur. J. Hum. Genet.* 12: 365-371.
4. Höglund, P.J., et al. 2005. The repertoire of solute carriers of family 6: identification of new human and rodent genes. *Biochem. Biophys. Res. Commun.* 336: 175-189.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610299. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Betarbet, R., et al. 2008. Fas-associated factor 1 and Parkinson's disease. *Neurobiol. Dis.* 31: 309-315.

CHROMOSOMAL LOCATION

Genetic locus: Slc6a17 (mouse) mapping to 3 F2.3.

PRODUCT

NTT4 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NTT4 shRNA Plasmid (m): sc-150088-SH and NTT4 shRNA (m) Lentiviral Particles: sc-150088-V as alternate gene silencing products.

For independent verification of NTT4 (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-150088A, sc-150088B and sc-150088C.

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 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

NTT4 siRNA (m) is recommended for the inhibition of NTT4 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 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 NTT4 gene expression knockdown using RT-PCR Primer: NTT4 (m)-PR: sc-150088-PR (20 μ l). 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.