NPTN siRNA – Neuroplastin (Rat)

PRODUCT OVERVIEW

Product Name	NPTN, siRNA
Full Product Name	NPTN siRNA (Rat)
Product Gene Name	NPTN sirna
Product Synonym Names	SDFR1; SDR1; Neuroplastin; Glycoprotein 55/65; gp55/65; Stromal cell-derived receptor 1; SDR-1
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	NPTN siRNA (Rat) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	30,836 Da
3D Structure	ModBase 3D Structure for P97546
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of rat NPTN gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for NPTN sirna	RNA Interference (RNAi)
Related Product Information for NPTN sirna	MBS8234472 is an siRNA targeting NPTN. Also known as NPTN siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit NPTN expression using RNA interference
Other Notes	Small volumes of NPTN sirna vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for NPTN. It may not necessarily be applicable to this product.

NCBI GI #	9507073
NCBI GeneID	56064

NCBI Accession #	NP_062253.1
UniProt Primary Accession #	P97546
UniProt Secondary Accession #	P97547; Q6IRE8
UniProt Related Accession #	P97546
GenBank Nucleotide #	NM_019380.1
NCBI Official Full Name	neuroplastin
NCBI Official Synonym Full Names	neuroplastin
NCBI Official Symbol	Nptn
NCBI Official Synonym Symbols	Sdfr1
UniProt Protein Name	Neuroplastin
UniProt Synonym Protein Names	Glycoprotein 55/65; gp55/65; Stromal cell-derived receptor 1; SDR-1
Protein Family	Neuroplastin
UniProt Gene Name	Nptn
UniProt Synonym Gene Names	Sdfr1; Sdr1; gp55/65; SDR-1
UniProt Entry Name	NPTN_RAT
NCBI Protein Information	neuroplastin
NCBI Summary for NPTN	synaptic membrane glycoprotein that is a member of the immunoglobulin (Ig) superfamily [RGD, Feb 2006]
UniProt Comments for NPTN	neuroplastin: Probable homophilic and heterophilic cell adhesion molecule involved in long term potentiation at hippocampal excitatory synapses through activation of p38MAPK. May also regulate neurite outgrowth by activating the FGFR1 signaling pathway. May play a role in synaptic plasticity. 5 isoforms of the human protein are produced by alternative splicing. Protein type: Cell development/differentiation; Membrane protein, integral Cellular Component: presynaptic membrane; postsynaptic membrane; cell surface; integral to membrane Molecular Function: transmembrane receptor protein tyrosine kinase activity; cell adhesion molecule binding; ATP binding; type 1 fibroblast growth factor receptor binding Biological Process: regulation of cell adhesion; elevation of cytosolic calcium ion concentration; peptidyl-tyrosine phosphorylation; positive regulation of fibroblast growth factor receptor signaling pathway; positive regulation of protein amino acid phosphorylation; homophilic cell adhesion; positive regulation of long-term neuronal synaptic plasticity; transmembrane receptor protein tyrosine kinase signaling pathway
Research Articles on NPTN	**1.** neuroplastins act as key ancillary proteins for MCT2 cell surface localisation and activity in some neuronal populations, thus playing an important role in facilitating the uptake of lactate for use as a respiratory fuel.
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