SMPD2 siRNA – Sphingomyelin Phosphodiesterase 2 (Rat)

PRODUCT OVERVIEW

Product Name	SMPD2, siRNA
Full Product Name	SMPD2 siRNA (Rat)
Product Gene Name	SMPD2 sirna
Product Synonym Names	Sphingomyelin phosphodiesterase 2; Lyso-platelet-activating factor-phospholipase C; Lyso-PAF-PLC; Neutral sphingomyelinase; N-SMase; nSMase
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	SMPD2 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	47,645 Da
3D Structure	ModBase 3D Structure for Q9ET64
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 SMPD2 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 SMPD2 sirna	RNA Interference (RNAi)
Related Product Information for SMPD2 sirna	MBS8209243 is an siRNA targeting SMPD2. Also known as SMPD2 siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit SMPD2 expression using RNA interference
Other Notes	Small volumes of SMPD2 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 SMPD2. It may not necessarily be applicable to this product.

NCBI GI #	14389301

NCBI GeneID	83537
NCBI Accession #	NP_112650.1
UniProt Primary Accession #	Q9ET64
UniProt Secondary Accession #	Q5BKB2
UniProt Related Accession #	Q9ET64
GenBank Nucleotide #	NM_031360.2
NCBI Official Full Name	sphingomyelin phosphodiesterase 2
NCBI Official Synonym Full Names	sphingomyelin phosphodiesterase 2, neutral membrane
NCBI Official Symbol	Smpd2
NCBI Official Synonym Symbols	nSMase
UniProt Protein Name	Sphingomyelin phosphodiesterase 2
UniProt Synonym Protein Names	Lyso-platelet-activating factor-phospholipase C; Lyso-PAF-PLC; Neutral sphingomyelinase; N-SMase; nSMase
UniProt Gene Name	Smpd2
UniProt Synonym Gene Names	Lyso-PAF-PLC; N-SMase; nSMase
UniProt Entry Name	NSMA_RAT
NCBI Protein Information	sphingomyelin phosphodiesterase 2
NCBI Summary for SMPD2	catalyzes the Mg2+ dependent hydrolysis of sphingomyelin to form N-acylsphingosine and choline phosphate; also has a lower activity for the hydrolysis of lyso-platelet activating factor to 1-alkylglycerol [RGD, Feb 2006]
UniProt Comments for SMPD2	Converts sphingomyelin to ceramide. Hydrolyze 1-acyl-2-lyso-sn-glycero-3-phosphocholine (lyso-PC) and 1-O-alkyl-2-lyso-sn-glycero-3-phosphocholine (lyso-platelet-activating factor). The physiological substrate seems to be Lyso-PAF.
Research Articles on SMPD2	**1.** ANG II stimulates ceramide formation via the activation of nSMase in the kidney.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
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