VPS4A siRNA – Vacuolar Protein Sorting-Associated Protein 4a (Rat)

PRODUCT OVERVIEW

Product Name	VPS4A, siRNA
Full Product Name	VPS4A siRNA (Rat)
Product Gene Name	VPS4A sirna
Product Synonym Names	VPS4-A; Vacuolar protein sorting-associated protein 4A
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	VPS4A 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	48,907 Da
3D Structure	ModBase 3D Structure for Q793F9
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 VPS4A 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 VPS4A sirna	RNA Interference (RNAi)
Related Product Information for VPS4A sirna	MBS8203970 is an siRNA targeting VPS4A. Also known as VPS4A siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit VPS4A expression using RNA interference
Other Notes	Small volumes of VPS4A 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 VPS4A. It may not necessarily be applicable to this product.

NCBI GI #	21728408
NCBI GeneID	246772

NCBI Accession #	NP_663711.1
UniProt Primary Accession #	Q793F9
UniProt Related Accession #	Q793F9
GenBank Nucleotide #	NM_145678.1
NCBI Official Full Name	vacuolar protein sorting-associated protein 4A
NCBI Official Synonym Full Names	vacuolar protein sorting 4 homolog A (S. cerevisiae)
NCBI Official Symbol	Vps4a
UniProt Protein Name	Vacuolar protein sorting-associated protein 4A
Protein Family	Vacuolar protein sorting-associated protein
UniProt Gene Name	Vps4a
UniProt Synonym Gene Names	vps4-A
UniProt Entry Name	VPS4A_RAT
NCBI Protein Information	vacuolar protein sorting-associated protein 4A
NCBI Summary for VPS4A	binds Rho family GTPase Rnd2; may play a role in endosomal trafficking [RGD, Feb 2006]
UniProt Comments for VPS4A	VPS4A: Involved in late steps of the endosomal multivesicular bodies (MVB) pathway. Recognizes membrane-associated ESCRT-III assemblies and catalyzes their disassembly, possibly in combination with membrane fission. Redistributes the ESCRT-III components to the cytoplasm for further rounds of MVB sorting. MVBs contain intraluminal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome and mostly are delivered to lysosomes enabling degradation of membrane proteins, such as stimulated growth factor receptors, lysosomal enzymes and lipids. In conjunction with the ESCRT machinery also appears to function in topologically equivalent membrane fission events, such as the terminal stages of cytokinesis and enveloped virus budding (HIV-1 and other lentiviruses). Involved in cytokinesis. Belongs to the AAA ATPase family. Protein type: Vesicle; EC 3.6.4.6 Cellular Component: spindle pole; centrosome; late endosome membrane; perinuclear region of cytoplasm; early endosome; cytoplasm; midbody; nucleus Molecular Function: protein C-terminus binding; protein domain specific binding; Rho GTPase binding; microtubule-severing ATPase activity; ATP binding Biological Process: cell separation during cytokinesis; ubiquitin-dependent protein catabolic process via the multivesicular body pathway; metabolic process; endosome transport; mitotic metaphase plate congression; negative regulation of cytokinesis; cytoplasmic microtubule organization and biogenesis; vesicle-mediated transport; protein transport; cell division; abscission; nuclear organization and biogenesis; vacuole organization and biogenesis
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