PLK2 siRNA – Serine/Threonine-Protein Kinase PLK2 (Rat)

PRODUCT OVERVIEW

Product Name	PLK2, siRNA
Full Product Name	PLK2 siRNA (Rat)
Product Gene Name	PLK2 sirna
Product Synonym Names	SNK; Serine/threonine-protein kinase PLK2; Polo-like kinase 2; PLK-2; Serine/threonine-protein kinase SNK; Serum-inducible kinase
Host	Synthetic
Species Reactivity	Rat
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	PLK2 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	77,920 Da
3D Structure	ModBase 3D Structure for Q9R012
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 PLK2 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 PLK2 sirna	RNA Interference (RNAi)
Related Product Information for PLK2 sirna	MBS8234386 is an siRNA targeting PLK2. Also known as PLK2 siRNA (Rat). Reactive in Rat. Host: Synthetic. siRNA to inhibit PLK2 expression using RNA interference
Other Notes	Small volumes of PLK2 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 PLK2. It may not necessarily be applicable to this product.

NCBI GI #	13929172

NCBI GeneID	83722
NCBI Accession #	NP_114009.1
UniProt Primary Accession #	Q9R012
UniProt Related Accession #	Q9R012
GenBank Nucleotide #	NM_031821.1
NCBI Official Full Name	serine/threonine-protein kinase PLK2
NCBI Official Synonym Full Names	polo-like kinase 2
NCBI Official Symbol	Plk2
NCBI Official Synonym Symbols	Snk
UniProt Protein Name	Serine/threonine-protein kinase PLK2
UniProt Synonym Protein Names	Polo-like kinase 2; PLK-2; Serine/threonine-protein kinase SNK; Serum-inducible kinase
Protein Family	Serine/threonine-protein kinase
UniProt Gene Name	Plk2
UniProt Synonym Gene Names	Snk; PLK-2
UniProt Entry Name	PLK2_RAT
NCBI Protein Information	serine/threonine-protein kinase PLK2
NCBI Summary for PLK2	binds Ca2+ and integrin-binding protein Cib; may phosphorylate proteins in the dendrites of activated neurons; may play a role in long term synaptic plasticity [RGD, Feb 2006]
UniProt Comments for PLK2	PLK2: a kinase of the PLK family. Participates in a mitotic checkpoint in which p53-dependent activation Plk2 prevents mitotic catastrophe following spindle damage. Plk2(-/-) embryos show retarded growth and skeletal development late in gestation. Apparently plays a role for Plk2 in the cell cycle. Protein type: EC 2.7.11.21; Protein kinase, Other; Kinase, protein; Tumor suppressor; Protein kinase, Ser/Thr (non-receptor); Other group; PLK family Cellular Component: centriole; centrosome; dendrite; intracellular Molecular Function: protein serine/threonine kinase activity; signal transducer activity; protein binding; protein complex binding; ATP binding Biological Process: regulation of centriole replication; positive regulation of I-kappaB kinase/NF-kappaB cascade; positive regulation of protein binding; mitotic cell cycle checkpoint; regulation of synaptic plasticity; protein amino acid phosphorylation; memory; mitotic spindle organization and biogenesis; positive regulation of proteasomal ubiquitin-dependent protein catabolic process; Ras protein signal transduction; mitotic cell cycle; Rap protein signal transduction; G1/S transition of mitotic cell cycle; negative regulation of apoptosis
Research Articles on PLK2	**1.** Prenatal stress increased Snk Polo-like kinase 2 in thr hippocampus of the offspring at adulthood in rats
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