RPS6KB2 siRNA – Ribosomal Protein S6 Kinase Beta-2 (Mouse)

PRODUCT OVERVIEW

Product Name	RPS6KB2, siRNA
Full Product Name	RPS6KB2 siRNA (Mouse)
Product Gene Name	RPS6KB2 sirna
Product Synonym Names	Ribosomal protein S6 kinase beta-2; S6K-beta-2; S6K2; 70 kDa ribosomal protein S6 kinase 2; p70 ribosomal S6 kinase beta; p70 S6 kinase beta; p70 S6K-beta; p70 S6KB
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	RPS6KB2 siRNA (Mouse) 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	53,538 Da
3D Structure	ModBase 3D Structure for Q9Z1M4
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 mouse RPS6KB2 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 RPS6KB2 sirna	RNA Interference (RNAi)
Related Product Information for RPS6KB2 sirna	MBS8220353 is an siRNA targeting RPS6KB2. Also known as RPS6KB2 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit RPS6KB2 expression using RNA interference
Other Notes	Small volumes of RPS6KB2 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 RPS6KB2. It may not necessarily be applicable to this product.

NCBI GI #	10946894
NCBI GeneID	58988
NCBI Accession #	NP_067460.1
UniProt Primary Accession #	Q9Z1M4
UniProt Related Accession #	Q9Z1M4
GenBank Nucleotide #	NM_021485.2
NCBI Official Full Name	ribosomal protein S6 kinase beta-2
NCBI Official Synonym Full Names	ribosomal protein S6 kinase, polypeptide 2
NCBI Official Symbol	Rps6kb2
NCBI Official Synonym Symbols	S6K2; 70kDa
UniProt Protein Name	Ribosomal protein S6 kinase beta-2
UniProt Synonym Protein Names	70 kDa ribosomal protein S6 kinase 2; p70 ribosomal S6 kinase beta; p70 S6 kinase beta; p70 S6K-beta; p70 S6KB
Protein Family	Ribosomal protein S6 kinase
UniProt Gene Name	Rps6kb2
UniProt Synonym Gene Names	S6K-beta-2; S6K2; p70 S6 kinase beta; p70 S6K-beta; p70 S6KB
UniProt Entry Name	KS6B2_MOUSE
NCBI Protein Information	ribosomal protein S6 kinase beta-2
UniProt Comments for RPS6KB2	P70S6KB: an AGC kinase of the RSK family that is required for cell growth and G1 cell cycle progression. Is phosphorylated and activated by mTOR in mitogenic pathways downstream of phosphoinositide 3 kinase (PI3K). Phosphorylates the S6 protein of the 40S ribosomal subunit and is involved in translational control of 5' oligopyrimidine tract mRNAs. Activity is controlled by multiple phosphorylation events located within the catalytic, linker and pseudosubstrate domains. Mouse knockout shows symptoms of insulin resistance, and increased insulin senstivity, resulting in protection against diet-induced obesity. Protein expression and activation upregulated in colon adenocarcinoma cell lines. Increased expression in breast cancer correlated with poor survival. Selectively amplified and overexpressed within the 17q23 breast cancer amplicon. Two isoforms produced by alternative initiation have been reported. Protein type: Protein kinase, AGC; Translation; Protein kinase, Ser/Thr (non-receptor); Kinase, protein; EC 2.7.11.1; AGC group; RSK family; p70 subfamily Cellular Component: cytoplasm; intracellular; nucleus Molecular Function: transferase activity; protein serine/threonine kinase activity; transferase activity, transferring phosphorus-containing groups; nucleotide binding; kinase activity; ribosomal protein S6 kinase activity; peptide binding; ATP binding; protein kinase activity Biological Process: positive regulation of translational initiation; protein kinase B signaling cascade; signal transduction; protein amino acid phosphorylation; phosphorylation
Research Articles on RPS6KB2	**1.** S6K2 regulates hepatic energy homeostasis by repressing PPARalpha activity.
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