OXSR1 siRNA – Serine/Threonine-Protein Kinase OSR1 (Mouse)

PRODUCT OVERVIEW

Product Name	OXSR1, siRNA
Full Product Name	OXSR1 siRNA (Mouse)
Product Gene Name	OXSR1 sirna
Product Synonym Names	OSR1; Serine/threonine-protein kinase OSR1; Oxidative stress-responsive 1 protein
Host	Synthetic
Species Reactivity	Mouse
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	OXSR1 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	58,214 Da
3D Structure	ModBase 3D Structure for Q6P9R2
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 OXSR1 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 OXSR1 sirna	RNA Interference (RNAi)
Related Product Information for OXSR1 sirna	MBS8217945 is an siRNA targeting OXSR1. Also known as OXSR1 siRNA (Mouse). Reactive in Mouse. Host: Synthetic. siRNA to inhibit OXSR1 expression using RNA interference
Other Notes	Small volumes of OXSR1 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 OXSR1. It may not necessarily be applicable to this product.

NCBI GI #	365777424

NCBI GeneID	108737
NCBI Accession #	NP_598746.2
UniProt Primary Accession #	Q6P9R2
UniProt Secondary Accession #	Q8BVZ9; Q8C0B9
UniProt Related Accession #	Q6P9R2
GenBank Nucleotide #	NM_133985.2
NCBI Official Full Name	serine/threonine-protein kinase OSR1
NCBI Official Synonym Full Names	oxidative-stress responsive 1
NCBI Official Symbol	Oxsr1
NCBI Official Synonym Symbols	Osr1; AI462649; AW209236; mKIAA1101; 2210022N24Rik; 2810422B09Rik
UniProt Protein Name	Serine/threonine-protein kinase OSR1
UniProt Synonym Protein Names	Oxidative stress-responsive 1 protein
Protein Family	Serine/threonine-protein kinase
UniProt Gene Name	Oxsr1
UniProt Entry Name	OXSR1_MOUSE
NCBI Protein Information	serine/threonine-protein kinase OSR1
UniProt Comments for OXSR1	OSR1: oxidative-stress responsive 1 protein is a ubiquitously expressed protein kinase of the STE20 family. Regulates Na-K-Cl cotransporter (NKCC) activity. Regulates downstream kinases in response to environmental stress. May also have a function in regulating the actin cytoskeleton. Binds to and phosphorylates PAK1. Interacts and is phosphorylated by WNK1. Knockdown of either WNK1 or OXSR1 reduces NKCC activity. Interacts with chloride channel proteins SLC12A6 isoform 2, SLC12A1 and SLC12A2 but not with SLC12A4 and SLC12A7, possibly establishing sensor/signaling modules that initiate the cellular response to environmental stress. An important paralog of this gene is STRADB. Protein type: Kinase, protein; EC 2.7.11.1; Protein kinase, STE; Protein kinase, Ser/Thr (non-receptor); STE group; STE20 family; FRAY subfamily Cellular Component: cytoplasm Molecular Function: transferase activity; protein serine/threonine kinase activity; protein binding; metal ion binding; transferase activity, transferring phosphorus-containing groups; magnesium ion binding; nucleotide binding; kinase activity; ATP binding; protein kinase activity; receptor signaling protein serine/threonine kinase activity Biological Process: peptidyl-threonine phosphorylation; response to oxidative stress; phosphorylation; protein amino acid phosphorylation
Research Articles on OXSR1	**1.** increased phosphorylation of Na(+)-K(+)-2Cl(-) cotransporter in obesity and identifies a new role for AMP-activated protein kinase in regulating the activity of oxidative stress responsive 1 kinase-related proline-alanine-rich protein kinase
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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