Product datasheet for TL515652

Sorcs2 Mouse shRNA Plasmid (Locus ID 81840)

Product data:

Product Type:	shRNA Plasmids
Product Name:	Sorcs2 Mouse shRNA Plasmid (Locus ID 81840)
Locus ID:	81840
Synonyms:	mKIAA1329; N28137
Vector:	pGFP-C-shLenti (TR30023)
E. coli Selection:	Chloramphenicol (34 ug/ml)
Mammalian Cell Selection:	Puromycin
Format:	Lentiviral plasmids
Components:	Sorcs2 - Mouse, 4 unique 29mer shRNA constructs in lentiviral GFP vector(Gene ID = 81840). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pGFP-C-shLenti Vector, TR30021, included for free.
RefSeq:	NM_030889, NM_030889.1, NM_030889.2, BC138873, BC022668, BC138875
UniProt ID:	Q9EPR5
Summary:	The heterodimer formed by NGFR and SORCS2 functions as receptor for the precursor forms of NGF (proNGF) and BDNF (proBDNF) (PubMed:22155786, PubMed:24908487, PubMed:27457814, PubMed:29909994). ProNGF and proBDNF binding both promote axon growth cone collapse (in vitro) (PubMed:24908487). Plays a role in the regulation of dendritic spine density in hippocampus neurons (PubMed:29909994). Required for normal neurite branching and extension in response to BDNF (PubMed:27457814, PubMed:29909994). Plays a role in BDNF-dependent hippocampal synaptic plasticity (PubMed:29909994, PubMed:27457814). Together with NGFR and NTRK2, is required both for BDNF-mediated synaptic long-term depression and long-term potentiation (PubMed:27457814). ProNGF binding promotes dissociation of TRIO from the heterodimer, which leads to inactivation of RAC1 and/or RAC2 and subsequent reorganization of the actin cytoskeleton (By similarity). Together with the retromer complex subunit VPS35, required for normal expression of GRIN2A at synapses and dendritic cell membranes (PubMed:28469074). Required for normal expression of the amino acid transporter SLC1A1 at the cell membrane, and thereby contributes to protect cells against oxidative stress (PubMed:30840898).[UniProtKB/Swiss-Prot Function]

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shRNA Design:	These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact techsupport@origene.com. If you need a special design or shRNA sequence, please utilize our custom shRNA service.
Performance Guaranteed:	OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.
	For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at techsupport@origene.com. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).