OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG216425

Sorcs2 (NM_030889) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sorcs2 (NM_030889) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sorcs2
Synonyms:	mKIAA1329; N28137
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG216425 representing NM_030889
Red=Cloning site Blue=ORF Green=Tags(s)

GACGTTGTATACGACTCCTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGGCGCGCCC

ATGGCGCACCGGGGACCCCCGAGCGCCCCGAAGCGTCCTGGCCCTACTGCGCCGGACCGGAGCTTTCAGG
CTCTGCTGCCGCCGTGCTGGCCACGTTCGTGGCCGCTGCTGCTGCTGCTGCTGGTGCTGGTGGCTGCCTG
CGGAGCGATGGGGCGCTCCCCCCAGCCCGGGCGCCAGGGTCCCGGTGTGCAGATCACTAGGCTGCTGCCC
GCGGGACGCACGGAGTCCGGCGATCGCAAAGATCCACAGGCACGAGAATCAGAACCCAGCGTCCCGGGTC
TCGGTCCGGGTTCTGCTTCGGGTCCCAGCACCGATGGCGCCCCAGCTCCGGGCAAGGGGCGCAGGGCTCG
GGCGGTGCCGGTGGCCGGTGCGGCTTCGGCTTCGCGCGCACAGGTCTCGCTCATCAGCACGTCGTTCGTG
CTCAAGGGAGACGCGACGCACAACCAGGCGATGGTACACTGGACAGGAGAGAACAGCAGCGTCATCTTGA
TCCTGACAAAGTACTACCATGCAGACATGGGCAAGGTTCTGGAAAGTTCTCTGTGGAGGTCCTCAGATTT
TGGGACAACCTACACCAAGCTTACTCTCCAGCCTGGTGTCACCACTGTCATTGACAACTTCTATATCTGC
CCAGCTAACAAAAGGAAGATCATCCTGGTGAGCTCATCCCTCGGTGACCGGGAACAGAGCCTCTTCCTCA
GCACTGATGAGGGCGCCACGTTCCAGAAGTATCCTGTCCCCTTCCTTGTGGAGATGCTCCTCTTCCACCC
GAAGGAGGAGGACAAGGTGCTGGCCTACACCAAGGACAGCAAGCTGTATGTGTCATCGGACCTGGGAAAG
AAGTGGACACTTCTGCAGGAACGGGTGACCAAGGACCACGTGTTCTGGGCTGTGTCTGGGGTGGATGACG
ACCCAAACTTGGTCCACGTGGAAGCTCAGGACCTCAGTGGAGGCTATCGGTACTACACGTGTCTGATCTA
CAACTGCTCAGCCCAGCCACACATAGCACCCTTCTCCGGCCCCATTGACCGCGGGTCCCTGACCGTGCAG
GATGAGTACATCTTTTTGAAGGCAACATCAACAAACCGAACCAAGTACTATGTCTCCTATCGCCGAAGTG
ACTTTGTCCTGATGAAGCTGCCCAAGTATGCCCTGCCCAAGGACCTACAGATCATCAGCACGGATGAGCA
GCAGGTGTTTGTGGCCGTACAGGAGTGGAACCAGGTAGACACCTACAACCTGTACCAGTCAGACCTGCGT
GGGGTTCGCTATTCCCTGGTGCTGGAGAATGTGCGCAGCTCGAGGCAAGCCGAGGAGAACGTGGTCATCG
ACATCCTTGAGGTCAGAGGGGTGAAGGGAGTCTTCTTGGCAAACCAGAAAGTGGATGGCAAGGTGACAAC
AGTCATAACCTACAACAAGGGCCGTGACTGGGATTACCTGAGGCCACCCAGCACCGACATGAATGGGAAG

View online »

CCCACCAACTGCCAGCCGCCGGACTGTTACCTGCACCTGCACTTGCGGTGGGCAGACAACCCCTATGTGT
CAGGCACGGTACACACCAAGGACACTGCCCCTGGTCTCATCATGGGTGCAGGTAACCTGGGCTCACAGCT
GGTGGAGTATAAAGAGGAGATGTACATCACATCTGACTGCGGGCACACCTGGAGGCAGGTCTTTGAGGAA
GAGCACCATGTGTTGTACCTGGACCACGGTGGTGTCATTGCCGCCATCAAGGACACCTCCATCCCCCTGA
AGATCCTCAAGTTCAGCGTGGATGAGGGCCACACGTGGAGCACACACAACTTCACCAGCACCTCAGTGTT
CGTGGATGGGTTGCTGAGCGAGCCAGGGGATGAGACGCTGGTCATGACGGTCTTTGGTCACATCAGCTTC
CGCTCTGACTGGGAGCTGGTCAAGGTTGACTTCCGGCCCTCCTTCCCCCGGCAGTGTGGCGAGGATGACT
ACAGCTCCTGGGACCTCACTGACCTCCAGGGTGATCACTGCATCATGGGCCAACAGAGAAGTTACCGGAA
GAGAAAGTCCACATCCTGGTGTGTCAAGGGACGGAGCTTCACATCAGCACTCACGTCACGTGTGTGCAAG
TGCCGGGACTCCGACTTCCTCTGTGACTACGGGTTTGAGCGCTCATCTTCCTCGGAGTCCACTGCCAACA
AGTGCTCTGCCAACTTCTGGTTCAACCCTTTGTCTCCTCCTGAAGACTGTGTCTTGGGTCAGACTTACAC
TAGTAGCCTTGGGTACCGGAAGGTGGTATCCAATGTGTGTGAAGGTGGTGTGGACCTGCAGCAGAGCCCA
GTGCAGCTGCAGTGCCCCCTCCAGGCACCCCGGGGCCTGCAGGTGAGCATCCGAGGAGAGGCAGTGGCCG
TGCGGCCTAGAGAAGATGTGCTGTTTGTGGTGCGACAGGAACAGGGTGATGTCCTGACCACTAAATATCA
GGTGGATCTTGGGGATGGCTTCAAGGCCATGTACGTGAACCTCACTCTGACAGGCGAGCCCATTCGACAT
CACTATGAGAGTCCTGGCATCTACCGAGTGTCCGTCAGGGCTGAGAACATGGCAGGCCATGATGAGGCTG
TGCTCTTTGTCCAGGTCAACTCTCCCCTGCAGGCCCTCTACCTCGAGGTAGTTCCTGTCATTGGCGTCAA
CCAGGAGGTGAACCTCACAGCCGTGCTGTTACCCCTGAATCCCAACCTCACTGTCTTCTACTGGTGGATC
GGCCACAGCTTGCAGCCTCTGCTTTCCTTGGACAACTCGGTGACAACAAAGTTTACGGACGCTGGGGATG
TGCGTGTGACAGTGCAAGCTGCCTGCGGGAACTCAGTGCTTCAGGACTCCAGGCTCGTCCGTGTGCTCGA
TCAGTTCCAGGTGGTGCCTCTGCGGTTCTCCAGGGAGCTGGACACCTTTAACCCCAACACTCCTGAATGG
AGGGAAGATGTGGGACTGGTGGTCACCCGACTGCTCTCCAAGGAGACCAGCATCCCAGAGGAGCTGCTTG
TGACTGTGGTAAAGCCAGGGCTGCCCACCATAGCCGACTTGTATGTGCTTCTGCCTCTGCCAAGGCCCAC
AAGGAAGAGGAGCCTCACAAGTGACAAGAGACTGGCAGCCGTGCAGCAGGCGCTGAACTCTCATAGAATC
AGCTTCATCCTTCGAGGAGGGCTTCGTATCCTGGTGGAGCTGAGGGACACAGACACAGGTCCTCAGAGGC
CAGGTGGCAGTGGTGGCTACTGGGCCGTGGTGGTCCTCTTTGTCATTGGGCTCTTTGCAGTAGGAGCATT
CATCCTCTACAAGTTCAAAAGGAAACGTCCAGGCAGGACGGTGTACGCCCAGATGCACAATGAGAAGGAA
CAGGAGATGACAAGTCCCGTGAGCCACAGTGAGGATGCCCAGAGCACCATGCAGGGCAACCACTCAGGGG
TGGTCCTGAGCATCAACTCTCGTGAGATGCATAGCTACCTGGTGGGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

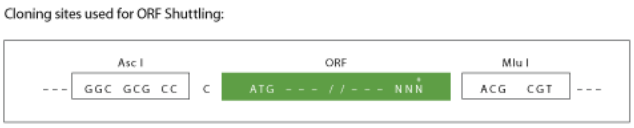
>MG216425 representing NM_030889
Red=Cloning site Green=Tags(s)

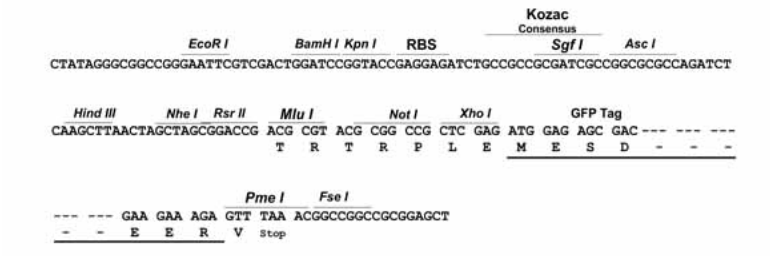
MAHRGPPSAPKRPGPTAPDRSFQALLPPCWPRSWPLLLLLLVLVAACGAMGRSPQPGRQGPGVQITRLLP
AGRTESGDRKDPQARESEPSVPGLGPGSASGPSTDGAPAPGKGRRARAVPVAGAASASRAQVSLISTSFV
LKGDATHNQAMVHWTGENSSVILILTKYYHADMGKVLESSLWRSSDFGTTYTKLTLQPGVTTVIDNFYIC
PANKRKIILVSSSLGDREQSLFLSTDEGATFQKYPVPFLVEMLLFHPKEEDKVLAYTKDSKLYVSSDLGK
KWTLLQERVTKDHVFWAVSGVDDDPNLVHVEAQDLSGGYRYYTCLIYNCSAQPHIAPFSGPIDRGSLTVQ
DEYIFLKATSTNRTKYYVSYRRSDFVLMKLPKYALPKDLQIISTDEQQVFVAVQEWNQVDTYNLYQSDLR
GVRYSLVLENVRSSRQAEENVVIDILEVRGVKGVFLANQKVDGKVTTVITYNKGRDWDYLRPPSTDMNGK
PTNCQPPDCYLHLHLRWADNPYVSGTVHTKDTAPGLIMGAGNLGSQLVEYKEEMYITSDCGHTWRQVFEE
EHHVLYLDHGGVIAAIKDTSIPLKILKFSVDEGHTWSTHNFTSTSVFVDGLLSEPGDETLVMTVFGHISF
RSDWELVKVDFRPSFPRQCGEDDYSSWDLTDLQGDHCIMGQQRSYRKRKSTSWCVKGRSFTSALTSRVCK
CRDSDFLCDYGFERSSSSESTANKCSANFWFNPLSPPEDCVLGQTYTSSLGYRKVVSNVCEGGVDLQQSP
VQLQCPLQAPRGLQVSIRGEAVAVRPREDVLFVVRQEQGDVLTTKYQVDLGDGFKAMYVNLTLTGEPIRH
HYESPGIYRVSVRAENMAGHDEAVLFVQVNSPLQALYLEVVPVIGVNQEVNLTAVLLPLNPNLTVFYWWI
GHSLQPLLSLDNSVTTKFTDAGDVRVTVQAACGNSVLQDSRLVRVLDQFQVVPLRFSRELDTFNPNTPEW
REDVGLVVTRLLSKETSIPEELLVTVVKPGLPTIADLYVLLPLPRPTRKRSLTSDKRLAAVQQALNSHRI
SFILRGGLRILVELRDTDTGPQRPGGSGGYWAVVVLFVIGLFAVGAFILYKFKRKRPGRTVYAQMHNEKE
QEMTSPVSHSEDAQSTMQGNHSGVVLSINSREMHSYLVG

TRTRPLE - GFP Tag - V

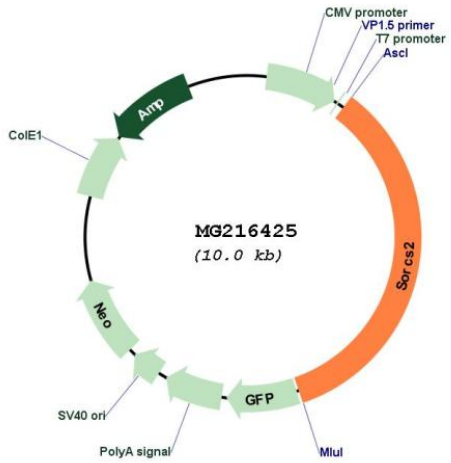
Restriction Sites: AscI-MluI

Cloning Scheme:





Plasmid Map:



ACCN:	NM_030889
ORF Size:	3477 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_030889.2, NP_112151.2
RefSeq Size:	5722 bp
RefSeq ORF:	3480 bp
Locus ID:	81840
UniProt ID:	Q9EPR5
Cytogenetics:	5 B3

Gene 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]