

Product datasheet for **RR208579**

Sema5a (NM_001107659) Rat Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Sema5a (NM_001107659) Rat Tagged ORF Clone
Tag: Myc-DDK
Symbol: Sema5a
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >RR208579 representing NM_001107659
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGATCGCC

ATGAAGGGAGCCTGCATCCTTGCATGGCTGTTCTCAAGCCTGGGAGTGTGGAGACTTGCTCGGCCTGAGA
CCCAGGACCTGCCAAGTGCCAGAGAGCTGAGCACCCCGTCGTCCTACAAAGAAATTGGCCCTGGTT
ACGGGAATTCAGAGCCGAGAATGCTGTGGATTTCTCGAGGTTAACATTTGACCCAGGACAGAAAGAACTT
GTCGTAGGAGCAAGAACTATCTTTCAGACTACAGCTCGAGGATCTGTCTCTCATCCAGGCTGTGCAGT
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CATACGAGTGTCTTAGTGGCGGGGACCGGCTTTCACCTGTGGGACCAATGCCTTCACACCCGCTGT
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TCCAAATGGCTCAATGAACCAAATTTGTGTCTTCTACGACATCGGGAACCTTCACTACTTCTTCTTCC
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CATTGGAGGACGATTTCTTCTGGAGGATACCTGGACTACCTTCATGAAGGCTCGCCTCAACTGCTCTCGG
CCTGGTGAAGTGCCGTTCTACTACAACGAGCTTCAAAGCACCTTCTTCTGCCGGAGCTGGATCTGATCT
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AGGATGCTCAGAAGTTCATCCTGATGCATGAAGTGGTGCAGCCAGTGACCACAGTGCCTTCTTTCATGGA
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CACCGTAGATGGGAGCTTTGGCCGTGGTCTCCATGGACACCCTGTACTCACACTGATGGCACTGCTGTG



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GGATCCTGCCTCTGCCGGTCCCCATCCTGTGACAGCCCAGCTCCACAGTGTGGCGGCTGGCAGTGTGAGG
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Protein Sequence:

>RR208579 representing NM_001107659
 Red=Cloning site Green=Tags(s)

MKGACILAWLFSSLGVWRLARPETQDPKACQRAEHPVVSYKEIGPWLREFRAENAVDFSRLTFDPGQKEL
 VVGARNYLFRLLQLEDLSLIQAVQWECDEATKACYSKSKSKEECQNYIRVLLVGGDRLFTCGTNAFTPVC
 TIRSLSNLTIHDQISGMARCPYSPQHNSALLTASGELYAATAMDFPGRDPAIYRSLGLPLRRTAQYN
 SKWLNPNFVSSYDIGNFTYFFRENAVEHDCGKTVFSRAARVCKNDIGGRFLLEDWTTFMKARLNCSR
 PGEVPPFYNELQSTFFLPELDLIYGIFFTNNVNSIAASAVCVFNLSAISQAFNGPFKYQENSRSAWLPYPN
 PNPNFQCGTMDQGLYVNLTERNLQDAQKFI LMHEVVQPVTVPSPMEDNSRF SHVAVDVVQGRDTLVHII
 YLATDYGTIKKVRAPLSQSSGSCLEELIEIFPERKSEPIRSLKILHSQSVL FVGLQEHVVKIPLKRCHF
 QTRGACIGAQDPYCGWDAVMKKCTSL EESLSMTQWDQSVPTCPTRNL TVDGSFGPWPWPTCTHTDGTAV
 GSCLCRSRCDSPAPQCGWQCEGPRMEITNCSRNGGWPWTWSWPCSTTCGIGFVQRQRSCSNPTPRHG
 GRVCVQGNREERYCNEHLLCPPHVFWTGWGPWERCTAQCGGGIQARRRTECENPDCAGCNVEYQPCNTNA
 CPCLKKTTPWTPWTPVNI SDNGGHYEQFRYTCARLPDPNLLVGRQRIEMRYCSSDGTSGCSTDGLSG
 DFLRAGRYSAHTVNGAWSAWTSWSQCSRDCSRGIRNRKRVNNPEPKYGGMPCLGPSLEFQECNII LCPV
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 SGTQVRTRQCILLFPVGSQCSGNTTESRPCVFDNFN IPEVSVARSSSVEEKRCGEFNMFMMAVGLSSSI
 LGCLL TLLVYTYCQRYQQSHDATVIHPVSPAALNSSITNHINKLDKYDSVEAIKAFNKNLILEERNKY
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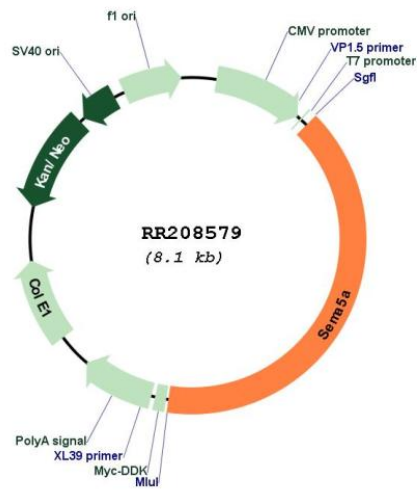
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001107659

ORF Size: 3222 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:	<ol style="list-style-type: none">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:	<u>NM_001107659.2</u> , <u>NP_001101129.1</u>
RefSeq Size:	10501 bp
RefSeq ORF:	3225 bp
Locus ID:	310207
UniProt ID:	<u>D3ZTD8</u>
Cytogenetics:	2q22
MW:	120.4 kDa
Gene Summary:	Bifunctional axonal guidance cue regulated by sulfated proteoglycans; attractive effects result from interactions with heparan sulfate proteoglycans (HSPGs), while the inhibitory effects depend on interactions with chondroitin sulfate proteoglycans (CSPGs). Ligand for receptor PLXNB3. In glioma cells, SEMA5A stimulation of PLXNB3 results in the disassembly of F-actin stress fibers, disruption of focal adhesions and cellular collapse as well as inhibition of cell migration and invasion through ARHGDI A-mediated inactivation of RAC1. May promote angiogenesis by increasing endothelial cell proliferation and migration and inhibiting apoptosis.[UniProtKB/Swiss-Prot Function]