

Product datasheet for **RG209657**

SEMA5B (NM_001031702) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SEMA5B (NM_001031702) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SEMA5B
Synonyms:	SEMAG; SemG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209657 representing NM_001031702 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCCTGTGGCTTCAGTCCGTCTCCTGTTGCCACCACCTCGTCCCTGGGCCGCTGATACCCAGCCC
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ATTGGCACCGAGTCGGGCACCATCCTGAAGGCGCTGTCCACGGCGAGCCGACGCCTCCACGGCTGCTACC
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

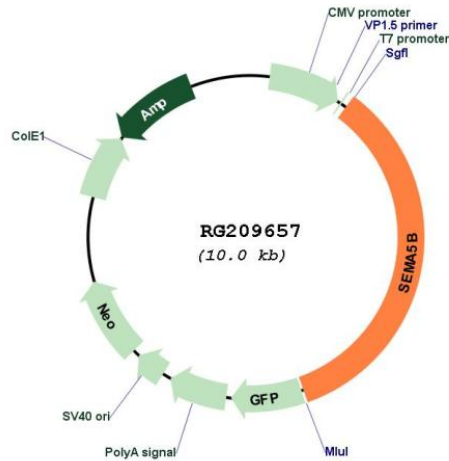
Protein Sequence: >RG209657 representing NM_001031702
 Red=Cloning site Green=Tags(s)

MPCGFSPSPVAHHLVPGPPDTPAQQLRGWTVGGWLLSLVRGLLPCLPPGARTAEGPIMVLAVLAVSLL
 LPSLTLLVSHLSSSQDVSSEPSSEQQCALSKHPTVAFEDLQPWSNFTYPGARDFSQLALDPSGNQLIV
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 PNFQCGTLPETGPNENLTERSLQDAQRLFLMSEAVQPVTPEPCVTQDSVRFSHLVVDLVQAKDTLYHVLV
 IGTESGTLKALSTASRSLHGCYLEELHVLPPGRREPLRSLRILHSARALFVGLRDGVLVPLERCAAYR
 SQGACLGARDPYCGWDGKQQRCTLEDSSNMSLWTQNITACVNRVTRDGGFGPWSWPQCEHLDGDNSSG
 SCLCRARSCDSPRRCGLDCLGPAIHIANCSRNGAWTPWSSWALCSTSCGIGFQVRQRSCSNPAPRHGG
 RICVKGSRERFCNENTPCVPPIFWASWGSWSKCSSNCGGMQSRRRACENGNSCLGCGVEFKTCNPEGC
 PEVRRNTPWTPWLPVNVVQGGARQEQRFRFTCRAPLADPHGLQFGRRRTETRTCPADGSGSCD DALVED
 LLRSGSTSPHTVSGGWAAGWPWSSCSRDCELGFRVRKRTC TNPEPRNGGLPCVGDAAEYQDCNPQACPVR
 GAWSCWTSWSPCSASC GGHHYQRTRSC TSPAPSPGEDI CLGLHTEEALCATQACPEGWSPWSEWCKTDD
 GAQSRSRHCEELLPGSSACAGNSSQSRPCPYSEIPVILPASSMEEATGCAGFNL IHLVATGISCF LGSL
 LTLAVYLSQCQHCQRQSQESTLVHPATPNHLHYKGGGTPKNEKYTPMEFKTLNKNLIPDDRANFYPLQQT
 NVYTTTYPSPLNKHSFRPEASPGQRCFPNS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI
Cloning Scheme:



Plasmid Map:


ACCN: NM_001031702

ORF Size: 3453 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_001031702.1](#), [NP_001026872.1](#)

RefSeq Size: 4737 bp

RefSeq ORF: 3456 bp

Locus ID: 54437

UniProt ID: [Q9P283](#)

Cytogenetics: 3q21.1

Protein Families: Transmembrane

Protein Pathways: Axon guidance

Gene Summary: This gene encodes a member of the semaphorin protein family which regulates axon growth during development of the nervous system. The encoded protein has a characteristic Sema domain near the N-terminus, through which semaphorins bind to plexin, and five thrombospondin type 1 repeats in the C-terminal region of the protein. The protein product may be cleaved and exist as a secreted molecule (PMID: 19463192). Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]