

## Product datasheet for **RG208521**

### Semaphorin 4D (SEMA4D) (NM\_006378) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 4D (SEMA4D) (NM_006378) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Semaphorin 4D
Synonyms:	A8; BB18; C9orf164; CD100; coll-4; COLL4; GR3; M-sema-G; SEMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG208521 representing NM\_006378  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGGATGTGCACCCCCATTAGGGGGCTGCTCATGGCCCTTGCAGTGATGTTTGGGACAGCGATGGCAT  
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 CTAACAATACTCAGCCTTCTGCTGAGCGAGGACAAGGACACCTTGTACATAGGTGCCCGGAGGGCGGTC  
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 AAGCAAAATGTGCAGAAAAGGGGAAATCAAACAGACAGAGTGCCTCAACTACATCCGGGTGCTGCAGCC  
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 ACATCCTTAAAGTTTCTGGGAAAAATGAAGATGGCAAAGGAAGATGTCCTTTGACCCAGCACACAGCT  
 ACACATCCGTATGGTTGATGGAGAACTTATTCGGGGACGTCGTATAATTTTTGGGAAGTGAACCCAT  
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 GGGTCTTTTGAAGTCCAGAATGACGTGTTGAAGGCCGAGAGCCCAAGTACGGTCTTATGGGCAGAAA  
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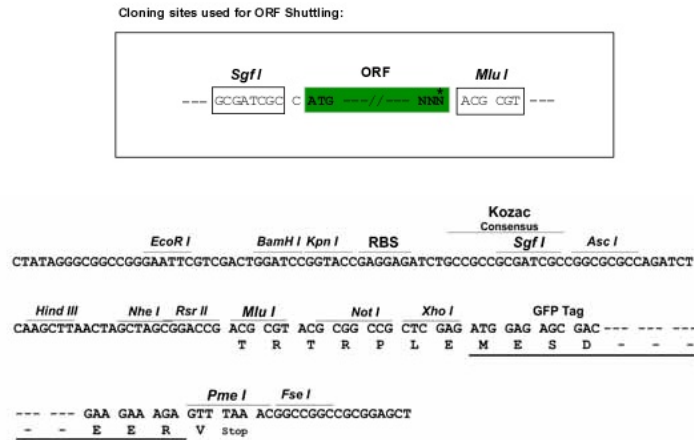
**ACGGTACGCGGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:** >RG208521 representing NM\_006378  
 Red=Cloning site Green=Tags(s)

```
MRMCTPIRGLLMALAVMFGTAMAFAPRITWEHREVHLVQFHEPDIYNYSALLLSEDKDTLYIGAREAV
FAVNALNISEKQHEVYWKVSEDKKAKCAEKGKSKQTECLNYIRVLQPLSATSLYVCGTNAFQPACDHLNL
TSFKFLGKNEDGKGRCPFDPAHSYTSVMVDGELYSGTSYNFLGSEPIISRNSHSPLRTEYAIPWLNPS
FVFADVIRKSPDSDGEDDRVYFFFTTEVSVYEYEFVFRVLIPRIARVCKGDQGGRLTLQKKWTSFLKARLI
CSRPDGLVFNVLRDVFLRSPGLKVPVFYALFTPQLNNVGLSAVCAYNLSTAEVFSHGKYMSTTVEQ
SHTKWVRYNGPVPKPRPGACIDSEARAANYTSSLNLPDKTLQFVKDHPLMDDSVTPIDNRPRLIKKDVNY
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SNSGVVQAPLAFCGKHGTCEDCVLARDPYCAWSPPTATCVALHQTESPSRGLIQEMSGDASVCPDKSKGS
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KNKTVFQVVAKHVLEVKVVPKPVVAPTL SVVQTEGSRIATKVL VASTQGSSPPTPAVQATSSGAILPPK
PAPTGTSCPKIVINTVPQLHSEKTMYLKSSDNRLMSLFLFFFVFLCLFFYNCYKGYLPRQCLKFRSA
LLIGKKKPKSDFCDREQSLKETLVEPGSFSQNGEHPKALDTGYETEQDTITSKVPTDREDSQRIDDL
ARDKPFVVKCELKFADSDADGD
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_006378

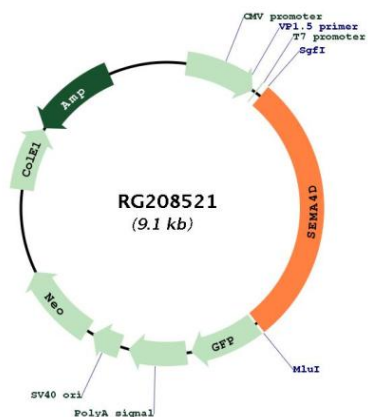
**ORF Size:** 2586 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_006378.2</a></u> , <u><a href="#">NP_006369.2</a></u>
<b>RefSeq Size:</b>	4675 bp
<b>RefSeq ORF:</b>	2589 bp
<b>Locus ID:</b>	10507
<b>UniProt ID:</b>	<u><a href="#">Q92854</a></u>
<b>Cytogenetics:</b>	9q22.2
<b>Domains:</b>	Sema, PSI, ig, IG, PSI
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Axon guidance
<b>Gene Summary:</b>	Cell surface receptor for PLXNB1 and PLXNB2 that plays an important role in cell-cell signaling (PubMed:20877282). Regulates GABAergic synapse development (By similarity). Promotes the development of inhibitory synapses in a PLXNB1-dependent manner (By similarity). Modulates the complexity and arborization of developing neurites in hippocampal neurons by activating PLXNB1 and interaction with PLXNB1 mediates activation of RHOA (PubMed:19788569). Promotes the migration of cerebellar granule cells (PubMed:16055703). Plays a role in the immune system; induces B-cells to aggregate and improves their viability (in vitro) (PubMed:8876214). Induces endothelial cell migration through the activation of PTK2B/PYK2, SRC, and the phosphatidylinositol 3-kinase-AKT pathway (PubMed:16055703). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RG208521