

## Product datasheet for **RG221685**

### Semaphorin 5A (SEMA5A) (NM\_003966) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 5A (SEMA5A) (NM_003966) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SEMA5A
Synonyms:	SEMAF; semF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG221685 representing NM_003966 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAAGGGAACTGTGTTATAGCATGGCTGTTCTCAAGCCTGGGGCTGTGGAGACTCGCCACCCAGAGG  
CCCAGGGTACGACTCAGTGCCAGAGAACCAGCATCCAGTCATCTCTATAAAGAAATTGGCCCTGGTT  
ACGGGAGTTCAGAGCGAAGAATGCTGCGGATTTCTCGCAGTTAACATTTGACCCAGGACAGAAAGA  
GACTGTTGTAGGAGCAAGAACTACCTCTTCAGGTTACAGCTTGAGGATCTGTCTTTATCCAGGCTGTG  
GAATGGGAGTGTGATGAAGCTACCAAAAAGGCCTGTTACAGCAAAGGCAAATCAAAGGAGGAATGTC  
GAACTACATCCGGGTGCTTCTGGTGGGTGGCGACCGGTTATTCACCTGTGGGACCAATGCATTACG  
CCTGTGCAACCAACCGCTCGTTGAGCAACCTGGCTGAGATCCATGATCAGATCAGTGGCATGGCCG  
CTGTCCCTACAGTGTCCCAAGCACAATTCCACAGCGCTCCTCACAGCTGGTGGGAGCTCTATGCTG  
TACAGCCATGGATTTCCAGGACGTGATCCTGCCATTTACCGAAGCCTAGGCATTTTACCTCCTCTCC  
GCACGGCGCAGTACAAC TCCAAATGGTCAATGAGCCAACTTTGTGTCTTTATGACATCGGAAATTT  
TACCTACTTCTTTTTCCGAGAAAATGCAGTAGAGCATGACTGTGGGAAAACAGTGTCTCCAGAGCTG  
CCCGGTGTGCAAGAACGATATTGGTGGGCGCTTCTGCTGGAAGACACCTGGACCACATTCATGAAG  
GCTCGCTGAAGTGTGCTCCCGTCTGGGGAAGTCCCCTTTACTACAACGAATTGCAGAGTACTTTTCT  
CCTGCCTGAGCTGGATTTGATCTATGGCATCTTTACCACCAATGTGAACAGCATTGCGGCCTCAGC  
TGTGTGGTCTTCAACCTGAGCGCCATCGCGCAGGCCCTTCTGCGCCCTCAAGTACCAAGAAAAC  
TCGCGCTCGGCCTGGCTACCGTATCCCAACCCAAACCCCACTTCCAGTGTGGCACCGTGGACCAG  
GGCCTGTACGTGAACCTGACCGAGAGAAATCTGCAGGATGCTCAGAAGTTCATTCTGGTGCATGAG  
GTGGTACAGCCAGTGACCACAGTGCCCTCCTTCATGGAGGACAATAGCCGCTTTCCACGTGGCAG  
TGCAGCTGGTGCAGGGCAGAGAAGCGCTCGTCCACATCATCTATTTGGCCACAGATTACGGAAC  
CATTAAAGAAAGTGCAGGATACCCCTGAATCAGACCTCAAGCAGCTGTTGCTGGAAGAGATTGAG  
CTTCCCTGAGAGGGCGAGGGAGCCCATCAGGAGCCTGCAGATCCTGCACAGCCAGAGTGTCTCG  
TGGGCTGCGGGAGCACGTGGTCAAGATCCCCCTGAAGAGGTGCCAGTCTAC



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CGCACACGCAGCACCTGCATTGGGGCCAGGACCCTTACTGTGGCTGGGATGTGGTAATGAAGAAATGCA  
 CAAGCCTGGAGGAGACCTGAGCATGACGCAGTGGGAACAGAGCATCTCTGCGTGTCCGACCAGGAATCT  
 CACCGTGGATGGGCACCTTGGTGTGTGGTCTCCGTGGACGCCCTTGACGCACACAGATGGCAGCGCCGTG  
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 CGTAGAAGAGAAAAGGTGGAGAGTTCACATGTTCCACATGATCGCCGTGGGGCTGAGCAGTCCATC  
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 CTGTCTACCCACCCGCTCACCTGCCCCCTTAATACCAGCATAACCAACCACATCAACAACTGGACAA  
 GTACGACTCGGTGGAGGCATCAAGGCATTTAACAAAAACAACCTTGATCCTAGAGGAAAGAAACAATAC  
 TTCAACCCACATCTCACTGGGAAGACCTATTCTAATGCCTACTTTACAGATCTCAATAATTATGATGAGT  
 AC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG221685 representing NM\_003966  
 Red=Cloning site Green=Tags(s)

MKGTCVIAWLFSSLGLWRLAHPEAQGTTQCRTEHPVISYKEIGPWLEFRKNAADFSQLTFDPGQKEL  
 VVGARNYLFRLQLEDLSLIQAVEWECDEATKKACYSKSKKEECQNYIRVLLVGGDRLFTCGTNAFTPVC  
 TNRSLNLAEIHDQISGMARCPYSPQHNSALLTAGGELYAATAMDFPGRDPAIYRSLGILPLRTAQYN  
 SKWLNPNFVSSYDIGNFTYFFRENAVEHDCGKTVFSRAARVCKNDIGGRFLLEDWTTFMKARLNCSR  
 PGEVPPFYNELQSTFFLPELDLIYGIFFTNVNSIAASAVCVFNLSAIAQAFSGPFKYQENSRSAWLPYPN  
 PNPHFQCGTVDQGLYVNLTERNLQDAQKILVHEVVQPVTVPSPFEDNSRFSHVAVDVVQGREALVHII  
 YLATDYGTIKKVRVPLNQTSSSCLLEEIELFPERRREPIRSLQILHSQSVLHVGLREHVVKIPLKRCQFY  
 RTRSTCIGAQDPYCGWDVVMKKCTSLSELSMTQWEQSI SACPTRNLTVDGHFGVWSPWTPCTHTDGSVA  
 GSCLCRTRSCDSPAPQCGGWQCEGPGMEIANCSRNGGWPWTSWSPCSTTCGIGFQVRQRSCSNPTPRHG  
 GRVCGVQNRREERYCNEHLLCPPHMFWTGWGPWERCTAQCGGGIQARRRICENGPDCAGCNVEYQSCNTNP  
 CPELKKTTPWTPVNI SDNGDHYEQRFRYTCKARLADPNLLEVGRQRIEMRYCSSDGTSGCSTDGLSG  
 DFLRAGRYSAHTVNGAWSAWTSWSQCSRDCSRGIRNRKRVNNPEPKYGGMPCLGPSLEYQECNTLPCPV  
 DGWWSWSPWTKSATCGGGHYMRTRSCSNPAPAYGGDICLGLHTEALCNTQPCPESWSEWSDWSECEA  
 SGVQVRARQCILLFPMGSQLSGNTTESRCPVFDNSNFIPEVSVARSSSVEEKRCGEFNMFMHIAVGLSSSI  
 LGCLLTLVVYTYCQRYQQSHDATVIHPVSPAPLNTSITNHINKLDKYDSVEAIKAFNKNLILEERNKY  
 FNPHLTGKTSNAYFTDLNNDYDEY

TRTRPLE - GFP Tag - V

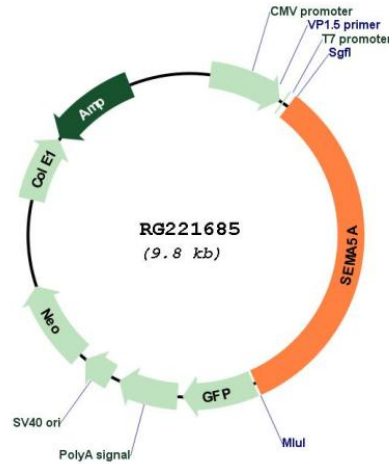
**Restriction Sites:**

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_003966

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.

<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_003966.1</a></u> , <u><a href="#">NP_003957.1</a></u>
<b>RefSeq Size:</b>	8056 bp
<b>RefSeq ORF:</b>	3225 bp
<b>Locus ID:</b>	9037
<b>UniProt ID:</b>	<u><a href="#">Q13591</a></u>
<b>Cytogenetics:</b>	5p15.31
<b>Protein Families:</b>	Transmembrane
<b>Protein Pathways:</b>	Axon guidance
<b>Gene Summary:</b>	This gene belongs to the semaphorin gene family that encodes membrane proteins containing a semaphorin domain and several thrombospondin type-1 repeats. Members of this family are involved in axonal guidance during neural development. This gene has been implicated as an autism susceptibility gene.[provided by RefSeq, Jan 2010]