

## Product datasheet for **RG205269**

### Semaphorin 3c (SEMA3C) (NM\_006379) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 3c (SEMA3C) (NM_006379) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Semaphorin 3c
Synonyms:	SEMAE; SemE
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG205269 representing NM\_006379  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCATTCCGGACAATTTGCGTGTGGTGGAGTATTTATTTGTCTATCTGTGTGAAAGGATCTTCCC  
 AGCCCCAAGCAAGAGTTTATTTAACATTTGATGAACTTCGAGAAACCAAGACCTCTGAATACTTCAGCCT  
 TTCCACCATCCTTTAGACTACAGGATTTTATTAAATGGATGAAGATCAGGACCGGATATATGTGGGAAGC  
 AAAGATCACATCTTTCCCTGAATATTAACAATAAAGTCAAGAAGCTTTGAGTGTCTTTCTGGCCAGCAT  
 CTACAATCAAAGTTGAAGAATGCAAAAATGGCTGGCAAAGATCCCACACACGGCTGTGGAACTTTGTCCG  
 TGTAATTCAGACTTTCAATCGCACACATTTGTATGTCTGTGGGAGTGGCGCTTTCAGTCTGTCTGACT  
 TACTTGAACAGAGGGAGGAGATCAGAGGACCAAGTTTTTCATGATTGACTCCAAGTGTGAATCTGGAAAAG  
 GACGCTGCTCTTCAACCCCAACGTGAACACGGTGTCTGTTATGATCAATGAGGAGCTTTTCTCTGGAAT  
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 GATCAACATAATTCAAAATGGCTAAGTGAACCTATGTTTGTAGATGCACATGTCATCCCAGATGGTACTG  
 ATCCAAAATGATGCTAAGGTGACTTCTTCTTCAAAGAAAACTGACTGACAATAACAGGAGCACGAAACA  
 GATTCAATCCATGATTGCTCGAATATGCTTAATGACACTGGTGGACTGCGTAGCCTTGTCAACAAGTGG  
 ACCACTTTCTTAAAGGCGAGGCTGGTGTGCTCGGTAACAGATGAAGACGGCCAGAAACACACTTTGATG  
 AATTAGAGGATGTGTTTCTGCTGGAACCTGATAACCCGAGGACAACACTAGTGTATGGCATTTTTACAAC  
 ATCAAGCTCAGTTTTCAAAGGATCAGCCGTGTGTGTATCATTATCTGATATACAGACTGTGTTAAT  
 GGGCCTTTTGGCCACAAAGAAGGGCCCAATCATCAGCTGATTTCCATACAGGCGAGAATCCCATATCCTC  
 GCCCTGGAACCTTGTCCAGGAGGACATTTACACCCAATATGCGAACCAAGGAGTTCCAGATGATGT  
 TGTCACTTTTATTCGGAACCATCCTCTCATGTACAATTCCATCTACCCAATCCACAAAAGGCCTTTGATT  
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 TGTCAAGTGGCAGCTCATTCTGGAGGAGCTGGAAGTCTTTAAGAATCATGCTCCTATAACAACAATGAAA  
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 GCCACATCTATGGTACAGCCTGTGCTGACTGCTGCCTGGCGCGGACCCTTATTGCGCCTGGGATGGCCA  
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 AGACAAAGACAGGAGGAAAGAGGTTAAGCTGAATGAACGAATAATAGCCACTTCACAGGGACTCCTGATC  
 CGCTCTGTTTCCAGGTTTCTGACCAAGGACTTTATCACTGCATTGCTACAGAAAATAGTTTCAAGCAGACCA  
 TAGCCAAGATCAACTTCAAAGTTTTAGATTAGAAAATGGTGGCTGTTGTGACGGACAAAATGGTCCCCGTG  
 GACCTGGGCCAGCTCTGTGAGGGCTTTACCCTTCCACCGAAGGACATCATGGGGCATTTCAGCCACTCA  
 GAAATGCAGATGATTAACCAATACTGCAAAGACTCGGCAGCAACATCAGCAGGGAGATGAATCACAGA  
 AAATGAGAGGGGACTATGGCAAGTTAAAGGCCCTCATCAATAGTCGAAAAAGTAGAAACAGGAGGAATCA  
 GTTGCCAGAGTCA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >RG205269 representing NM\_006379  
Red=Cloning site Green=Tags(s)

```
MAFRTICVLVGVFICISICVKGSSQPQARVYLTFDELRETKTSEYFSLSHHPLDYRILLMDEDQDRIYVGS
KDHILSLNINNI SQEALSVFWPASTIKVEECKMAGKDP THGCGNFVRVIQTFNRTHLYVCGSGAFSPVCT
YLNRRGRRSEDQVFMIDSKCESGKGRCSFNPNVNTVSMINEELFSGMYIDFMGTDAAI FRSLTKRNAVRT
DQHNSKWLSEPMFVDAHVIPDGTDPNDKVVYFFKEKL TDNNRSTKQIHSMIARICPNDTGGLRSLVNW
TTFLKARLVCSVTDEDPETHFDELEDVFLLETDPNRTLLVYGIFTTSSSVFKGSVAVCVYHLSDIQTVFN
GPF AHKEGPNHQLISYQGRIPYPRPGT CPGAFTPNMRTTKEFPDDVVTFIRNHPLMYSIYPIHKRPLI
VRIGTDYKYTKIAVDRVNAADGRYHVLFLGTDRTVQKV VVLP TNNSVSGELILEELEVFKNHAPITTMK
ISSKKQQLYVSSNEGVSQVSLHRCHIYGTACADCLARDPYCAWDGHVSCSRFYPTGKRRSRRQDVRHGPN
LTQCRGFNLKAYRNAAEIVQYGVKNNTTFLECAPKSPQASIKWLLQKDKDRRKEVKLNERI IATSQGLLI
RSVQGSQDGLYHC IATENSFKQTI AKINFKVL DSEMVA VVTDKWPWTWASSVRALPFHPKDIMGAFSHS
EMQMINQYCKDTRQQHQGD E SQKMRGDYGLKALINSRKSRRNRRLPES
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_006379

**ORF Size:** 2253 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\\_006379.2](#), [NP\\_006370.1](#)

**RefSeq Size:** 5189 bp

**RefSeq ORF:** 2256 bp

**Locus ID:** 10512

**UniProt ID:** [Q99985](#)

**Cytogenetics:** 7q21.11

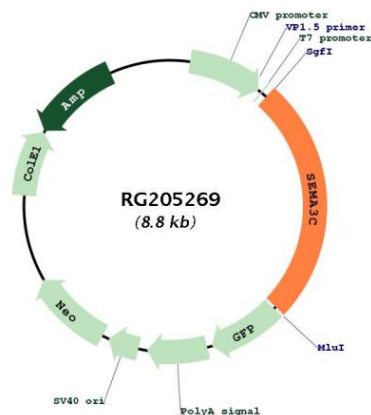
**Domains:** Sema, IG, PSI

**Protein Families:** Secreted Protein

**Protein Pathways:** Axon guidance

**Gene Summary:** This gene encodes a secreted glycoprotein that belongs to the semaphorin class 3 family of neuronal guidance cues. The encoded protein contains an N-terminal sema domain, integrin and immunoglobulin-like domains, and a C-terminal basic domain. Homodimerization and proteolytic cleavage of the C-terminal propeptide are necessary for the function of the encoded protein. It binds a neuropilin co-receptor before forming a heterotrimeric complex with an associated plexin. An increase in the expression of this gene correlates with an increase in cancer cell invasion and adhesion. Naturally occurring mutations in this gene are associated with Hirschsprung disease. [provided by RefSeq, May 2017]

## Product images:



Circular map for RG205269