

Product datasheet for **RG223532**

Semaphorin 3B (SEMA3B) (NM_004636) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 3B (SEMA3B) (NM_004636) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Semaphorin 3B
Synonyms:	LUCA-1; SemA; SEMA5; SEMAA; semaV
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG223532 representing NM_004636
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGCGGGCCGGGGCTGCCGCCGTGATCCCGGGCTGGCCCTGCTCTGGGCAGTGGGGTGGGGAGTG
 CCGCCCCAGCCCCACGCCTTCGGCTCTCCTTCCAAGAGCTCCAGGCCTGGCATGGTCTCCAGACTTT
 CAGCCTGGAGCGAACCTGCTGCTACCAGGCCTTGTGGTGGATGAGGAGCGTGGACGCCTGTTTGTGGGT
 GCCGAGAACCATGTGGCCTCCCTCAACCTGGACAACATCAGCAAGCGGGCCAAGAAGCTGGCCTGGCCGG
 CCCCTGTGGAATGGCGAGAGGAGTGCAACTGGGCAGGGAAGGACATTGGTACTGAGTGCATGAACCTCGT
 GAAGTTGCTGCATGCCTACAACCGCACCCATTTGCTGGCCTGTGGCACGGGAGCCTTCCACCCAACCTGT
 GCCTTTGTGGAAGTGGGCCACCGGGCAGAGGAGCCCGTCTCCGGCTGGACCCAGGAAGGATAGAGGATG
 GCAAGGGGAAGAGTCCTTATGACCCAGGCATCGGGCTGCCTCCGTGCTGGTGGGGGAGGAGCTATACTC
 AGGGGTGGCAGCAGACCTCATGGGACGAGACTTTACCATCTTTCGCAGCCTAGGGCAACGTCCAAGTCTC
 CGAACAGAGCCACACGACTCCCGCTGGCTCAATGAGCCCAAGTTTGTCAAGGTATTTTGGATCCCGGAGA
 GCGAGAACCAGACGACGACAAAATCTACTTCTTCTTTCGTGAGACGGCGGTAGAGGGCGGCCGGCACT
 GGGACGCCTGTCCGTGTCCCGCTTGGCCAGATCTGCCGGAACGACGTGGGGCGCCAGCGCAGCCTGGTC
 AACAAAGTGGACGACGTTCTGAAGGCGCGGCTGGTGTGCTCGGTGCCCGCGTCGAGGGCGACACCCACT
 TCGATCAGCTCCAGGATGTGTTTCTGTTGCTCCTCGCGGGACCACCGACCCCGTCTCTATGCCGTCTT
 CTCCACGTCCAGCAGCATCTTCCAGGGCTCTGCGGTGTGCGTGTACAGCATGAACGACGTGCGCCGGGCC
 TTCTTGGGACCTTTGCACACAAGGAGGGGCCATGCACCAGTGGGTGTACATACCAGGGTGCAGTCCCCT
 ACCCGCGCCAGGCATGTGCCCAAGACCTTTGGCACCTTCAGTTCACCAAGGACTTCCAGACGA
 TGTTCATCCAGTTTGCAGCGAACCACCCCTCATGTACAACCTGTCTGCTGCCCACTGGGGGGCGCCCTCTT
 TTCTTACAAGTTGGAGCCAATTACACCTTCACTCAAATTGCCGCGGACCGGGTTGCAGCCCTGACGGAC
 ACTATGACGTCTCTTCAATTGGCACAGACGTTGGCACGGTGTGAAGGTGATCTCGGTCCCAAGGGCAG
 TAGGCCAGCGCAGAGGGGCTGCTCCTGGAGGAGCTGCACGTGTTTGGAGACTCGGCCGCTGTCACCAGC
 ATGCAAATTTCTTCAAGAGGCACCAGCTGTACGTAGCCTCGCGGAGCGCGGTGGCCAGATCGCGTTGC
 ACCGCTGCGCTGCCACGGCCGCTGTCACCGAATGCTGTCTGGCGCGTGACCCCTACTGCGCCTGGGA
 CGGGTTCGCTGCACGCGCTTCCAGCCAGTGCCAAGAGGCGGTTCGGCGGCAAGACGTAAGGAATGGC
 GACCCAGCAGCTGTGCTCCGAGACTCGTCTCGTCCCGCGCTGCTGGAACACAAGGTGTTCCGGCTGG
 AGGGCAGCAGCGCTTTCTGGAGTGTGAGCCCGCTCGCTGCAGGCGCGGTGGAGTGGACTTTCAGCG
 CGCAGGGGTGACAGCCACACCCAGGTGCTGGCAGAGGAGCGCACCGAGCGCACCCCGGGGACTACTG
 CTGCGCAGGCTGCGGCGCGGGACTCGGGCGTGTACTTGTGCGCCGCGTCGAGCAGGGCTTTACGCAAC
 CGCTGCGTTCGCTGTCGCTGCACGTGTTGAGTGTACGACGGCCGAACGACTGGCGCGGGCCGAGGAGGC
 TGCGCCCGCCGCGCCCGGGGCCAACTCTGGTACCGGACTTTCTGCAGCTGGTGGAGCCGGGCGGA
 GGTGGCAGCGGAACTCCCTGCGCATGTGCCCGCCGACGCTGCGCTGCAGTCACTGCCCTGGAGTCCG
 GGAGAAAGGGCCGTAACCGGAGGACCCACGCCCTGAGCCTCGCGCTGAGCGGGGGCCGCGACGCGCAAC
 GCACTGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG223532 representing NM_004636
Red=Cloning site Green=Tags(s)

MGRAGAAAVIPGLALLWAVGLGSAAPSPRLRLSFQELQAWHGLQTFSLERTCCYQALLVDEERGRLFVG
 AENHVASLNLNDNISKRAKKLAWPAPVEWREECNWAGKDIGTECMNFVKLLHAYNRTHLLACGTGAFHPTC
 AFVEVGHRAEEPVLRLDPGRIEDGKGGKSPYDPRHRAASVLVGEELYSGVAADLMGRDFTIFRSLGQRPSL
 RTEPHDSRWLNEPKFVKVFWIPESENPDDDKIYFFFRETAVEAAPALGRLSVSRVQICRNDVGGQRSLV
 NKWTTFLKARLVCSVPGVEGDTHFDQLQDVFLSSRDHRTPLL YAVFSTSSSIFQGSAVCVSYMNDVRRR
 FLGPF AHKEGPMHQWVS YQGRVPYPRPGMCPSTKFTGTFSSTKDFPDDVIQFARNHPLMYNSVLPTGGRPL
 FLQVQANYTFTQIAADRVAADGHYDVLFIGTDVGTVLKVISVPGKSRPSAEGLLLEELHVFEDSAAVTS
 MQISSKRHQLYVASRSVAQIALHRCAAHGRVCTECLARDPYCAWDGVACTRFQPSAKRRFRQDVRNG
 DPSTLCSGDSSRPALLEHKVFGVEGSSAFLECEPRSLQARVEWTFQRAGVTAHTQVLAERTERTARGLL
 LRRRLRRRDSGVYLC AAVEQGF TQPLRRLSLHVL SATQAERLARAE EAAPAAPP GPKLWYRDFLQLVEPGG
 GGSANSLRMRCPALQSLPLESRRKGRNRRTHAPEPRAERGPR SATHW

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004636

ORF Size: 2247 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_004636.3](#)

RefSeq Size: 2989 bp

RefSeq ORF: 2250 bp

Locus ID: 7869

UniProt ID: [Q13214](#)

Cytogenetics: 3p21.31

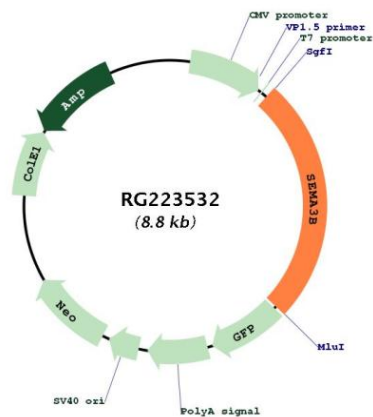
Domains: Sema, IG, PSI

Protein Families: Secreted Protein, Transmembrane

Protein Pathways: Axon guidance

Gene Summary: The protein encoded by this gene belongs to the class-3 semaphorin/collapsin family, whose members function in growth cone guidance during neuronal development. This family member inhibits axonal extension and has been shown to act as a tumor suppressor by inducing apoptosis. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Feb 2014]

Product images:



Circular map for RG223532