

## Product datasheet for **RC223532**

### 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:	Myc-DDK
Symbol:	Semaphorin 3B
Synonyms:	LUCA-1; SemA; SEMA5; SEMAA; semaV
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC223532 representing NM\_004636  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGGGCGGGCCGGGGCTGCCGCCGTGATCCCGGGCTGGCCCTGCTCTGGGCAGTGGGGTGGGGAGTG  
CGGCCCCAGCCCCACGCCTTCGGCTCTCCTTCCAAGAGCTCCAGGCCTGGCATGGTCTCCAGACTTT  
CAGCCTGGAGCGAACCTGCTGCTACCAGCCTTGTGGTGGATGAGGAGCGTGGACGCCTGTTTGTGGGT  
GCCGAGAACCATGTGGCCTCCCTCAACCTGGACAACATCAGCAAGCGGGCCAAGAAGCTGGCCTGGCCGG  
CCCCTGTGGAATGGCGAGAGGAGTGCAACTGGGCAGGGAAGGACATTGGTACTGAGTGCATGAACCTCGT  
GAAGTTGCTGCATGCCTACAACCGCACCCATTTGCTGGCCTGTGGCACGGGAGCCTTCCACCCAACCTGT  
GCCTTTGTGGAAGTGGGCCACCGGGCAGAGGAGCCCGTCTCCGGCTGGACCCAGGAAGGATAGAGGATG  
GCAAGGGGAAGAGTCCTTATGACCCAGGCATCGGGCTGCCTCCGTGCTGGTGGGGGAGGAGCTATACTC  
AGGGGTGGCAGCAGACCTCATGGGACGAGACTTTACCATCTTTCGCAGCCTAGGGCAACGTCCAAGTCTC  
CGAACAGAGCCACACGACTCCCGCTGGCTCAATGAGCCCAAGTTTGTCAAGGTATTTTGGATCCCGGAGA  
GGGAGAACCAGACGACGACAAAATCTACTTCTTCTTTCGTGAGACGGCGGTAGAGGGCGGCCGGCACT  
GGGACGCCTGTCCGTGTCCCGCTTGGCCAGATCTGCCGGAACGACGTGGGGCGCCAGCGCAGCCTGGTC  
AACAAAGTGGACGACGTTCTGAAGGCGCGGCTGGTGTGCTCGGTGCCCGCGTCGAGGGCGACACCCACT  
TCGATCAGCTCCAGGATGTGTTTCTGTTGCTCTCGCGGGACCACCGACCCCGTCTCTATGCCGTCTT  
CTCCACGTCCAGCAGCATCTTCCAGGGCTCTGCGGTGTGCGTGTACAGCATGAACGACGTGCGCCGGGCC  
TTCTTGGGACCTTTGCACACAAGGAGGGGCCATGCACCAGTGGGTGTACACCAGGGTGCAGTCCAGACGA  
ACCCGCGCCAGGCATGTGCCCCAGCAAGACCTTTGGCACCTTCAGTTCCACCAAGGACTTCCAGACGA  
TGTTCATCCAGTTTGCAGCGAACCACCCCTCATGTACAACCTCTGCTGCCCACTGGGGGGCGCCCTCTT  
TTCTTACAAGTTGGAGCCAATTACACCTTCACTCAAATGCGCGGACCGGGTTGCAGCCCTGACGGAC  
ACTATGACGTCTCTTCAATTGGCACAGACGTTGGCACGGTGTGTAAGGTGATCTCGGTCCCAAGGGCAG  
TAGGCCAGCGCAGAGGGGCTGCTCCTGGAGGAGCTGCACGTGTTTGGAGACTCGGCCGCTGTCACCAGC  
ATGCAAATTTCTTCCAAGAGGCACCAGCTGTACGTAGCCTCGCGGAGCGCGGTGGCCAGATCGCGTTGC  
ACCGCTGCGCTGCCACGGCCGCTGTCACCGAATGCTGTCTGGCGCGTGACCCCTACTGCGCCTGGGA  
CGGGTTCGCTGCACGCGCTTCCAGCCAGTGCCAAGAGGCGGTTCCGGCGCAAGACGTAAGGAATGGC  
GACCCAGCAGCTGTGCTCCGAGACTCGTCTCGTCCCGCGCTGCTGGAACACAAGGTGTTCCGGCTGG  
AGGGCAGCAGCGCTTTCTGGAGTGTGAGCCCGCTCGCTGCAGGCGCGGTGGAGTGGACTTTCAGCG  
CGCAGGGGTGACAGCCACACCCAGGTGCTGGCAGAGGAGCGCACCGAGCGCACCCCGGGGACTACTG  
CTGCGCAGGCTGCGGCGCGGGACTCGGGCGTGTACTTGTGCGCCGCGTCGAGCAGGGCTTTACGCAAC  
CGCTGCGTTCGCTGTCGCTGCACGTGTTGAGTGTACGACGGCCGAACGACTGGCGCGGGCCGAGGAGGC  
TGCGCCCGCCGCGCCCGGGGCCAACTCTGGTACCGGACTTCTGTCAGTGGTGGAGCCGGGCGGA  
GGTGGCAGCGCAACTCCCTGCGCATGTGCCCGCCGACGCTGCGCTGCAGTCACTGCCCTGGAGTCCG  
GGAGAAAGGGCCGTAACCGGAGGACCCACGCCCTGAGCCTCGCGCTGAGCGGGGGCCGCGACGCGCAAC  
GCACTGG

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC223532 representing NM\_004636  
 Red=Cloning site Green=Tags(s)

MGRAGAAAVIPGLALLWAVGLGSAAPSPRLRLSFQELQAWHGLQTFSLERTCCYQALLVDEERGRLFVG  
 AENHVASLNLNINISKRKLLAWPAPVEWREECNWAGKDIGTECMNFVKLLHAYNRTHLLACGTGAFHPTC  
 AFVEVGHRAEEPVLRLDPGRIEDGKGGKSPYDPRHRAASVLVGEELYSGVAADLMGRDFTIFRSLGQRPSL  
 RTEPHDSRWLNPEKFKVFWIPESENPDDDKIYFFRETAVEAAPALGRLSVSRVGIQCRNDVGGQRSLV  
 NKWTTFLKARLVCSVPGVEGDTHFDLQDVFLLSSRDHRTPLLYAVFSTSSIFQGSAVCVYSMNDVRRR  
 FLGPF AHKEGPMHQWVS YQGRVPYPRPGMCP SKTFGTFSSTKDFPDDVIQFARNHPLMYSVLP TGGRPL  
 FLQV GANYTFTQIAADRVAADGHYDVLFIGTDVGTVLKVISV PKGSRPSAEGLLLEELHVFEDSAAVTS  
 MQISSKRHLVYASRSVAQIALHRCAAHGRVCTECLARDPYCAWDGVACTRFQPSAKRRFRQDVRNG  
 DPSTLCSGDSRPALLEHKVFGVEGSSAFLECEPRSLQARVEWTFQRAGVTAHTQVLAERTERTARGLL  
 LRRLLRRRDSGVYLC AAVEQGF TQPLRRLSLHVL SATQAERLARAEEAAPAAPP GPKLWYRDFLQL VEPGG  
 GGSANSLRMRCPQALQSLPLESRRKGRNRRTHAPEPRAERGPR SATHW

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6258\\_e09.zip](https://cdn.origene.com/chromatograms/mk6258_e09.zip)

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_004636

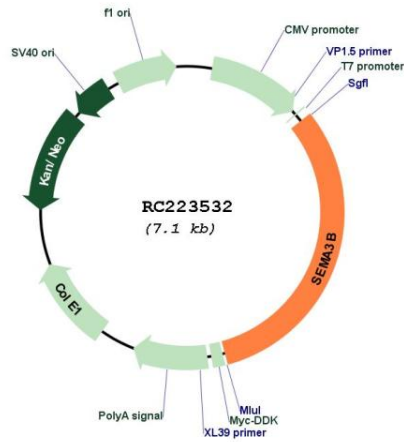
**ORF Size:** 2247 bp

**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](#)

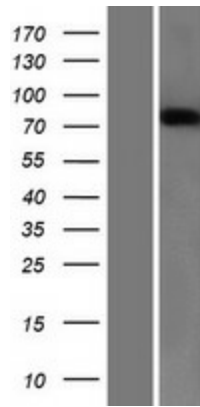
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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>	<a href="#">NM_004636.3</a>
<b>RefSeq Size:</b>	2989 bp
<b>RefSeq ORF:</b>	2250 bp
<b>Locus ID:</b>	7869
<b>UniProt ID:</b>	<a href="#">Q13214</a>
<b>Cytogenetics:</b>	3p21.31
<b>Domains:</b>	Sema, IG, PSI
<b>Protein Families:</b>	Secreted Protein, Transmembrane
<b>Protein Pathways:</b>	Axon guidance
<b>MW:</b>	83.12 kDa
<b>Gene Summary:</b>	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 RC223532



Western blot validation of overexpression lysate (Cat# [LY417853]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223532 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).