

Product datasheet for **RC202875**

Semaphorin 3B (SEMA3B) (NM_001005914) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 3B (SEMA3B) (NM_001005914) 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:**

>RC202875 representing NM_001005914
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGGGCGGGCCGGGGCTGCCGCCGTGATCCCGGGCTGGCCCTGCTCTGGGCAGTGGGGCTGGGGAGTG
 CCGCCCCAGCCCCACGCCTTCGGCTCTCCTTCCAAGAGCTCCAGGCCTGGCATGGTCTCCAGACTTT
 CAGCCTGGAGCGAACCTGCTGCTACCAGGCCTTGTGGTGGATGAGGAGCGTGGACGCCTGTTTGTGGGT
 GCCGAGAACCATGTGGCCTCCCTCAACCTGGACAACATCAGCAAGCGGGCCAAGAAGCTGGCCTGGCCGG
 CCCCTGTGGAATGGCGAGAGGAGTGCAACTGGGCAGGGAAGGACATTGGTACTGAGTGCATGAATTCGT
 GAAGTTGCTGCATGCCTACAACCGCACCCATTTGCTGGCCTGTGGCACGGGAGCCTTCCACCCAACCTGT
 GCCTTTGTGGAAGTGGGCCACCGGGCAGAGGAGCCCGTCTCCGGCTGGACCCAGGAAGGATAGAGGATG
 GCAAGGGGAAGAGTCCTTATGACCCAGGCATCGGGCTGCCTCCGTGCTGGTGGGGGAGGAGCTATACTC
 AGGGGTGGCAGCAGACCTCATGGGACGAGACTTTACCATCTTTCGCAGCCTAGGGCAACGTCCAAGTCTC
 CGAACAGAGCCACACGACTCCCGCTGGCTCAATGAGCCCAAGTTTGTCAAGGTATTTTGGATCCCGGAGA
 GCGAGAACCAGACGACGACAAAATCTACTTCTTCTTTCGTGAGACGGCGGTAGAGGGCGCGCCGGCACT
 GGGACGCCTGTCCGTGTCCCGCTTGGCCAGATCTGCCGGAACGACGTGGGGCGCCAGCGCAGCCTGGTC
 AACAAAGTGGACGACGTTCTGAAGGCGCGGCTGGTGTGCTCGGTGCCCGCGTCGAGGGCGACACCCACT
 TCGATCAGCTCCAGGATGTGTTTCTGTTGCTCCTCGCGGGACCACCGACCCCGTCTCTATGCCGTCTT
 CTCCACGTCCAGCATCTCCAGGGCTCTGCGGTGTGCGTGTACAGCATGAACGACGTGCCCGGGCCCTTC
 TTGGGACCCTTTGCACACAAGGAGGGGCCATGCACCAGTGGGTGTACACCAGGGTCCGCTCCCCTACC
 CGCGGCCAGGCATGTGCCCAAGCAAGACTTTGGCACCTTCAGTCCACCAAGGACTTCCAGACGATGT
 CATCCAGTTTGCAGGAAACCACCCCTCATGTACAACCTGTCTGCCCCTGGGGGGCGCCCTCTTTTC
 CTAACAAGTTGGAGCCAATTACACCTTCACTCAAATTGCCGCGGACCGGGTTCAGCCGCTGACGGACACT
 ATGACGTCCTCTTATTGGCACAGACGTTGGCACGGTGTGAAGGTGATCTCGGTCCCAAGGGCAGTAG
 GCCCAGCGCAGAGGGGCTGCTCCTGGAGGAGCTGCACGTGTTGAGGACTCGGCCGCTGCACCAGCATG
 CAAATTTCTTCCAAGAGGCACAGCTGTACGTAGCCTCGCGGAGCGCGGTGGCCAGATCGCGTTGCACC
 GCTGCGCTGCCACGGCCGCTGCACCGAATGCTGTCTGGCGCTGACCCCTACTGCGCTGGGACGG
 GGTGCGTGCACGCGTCCAGCCAGTCCAAGAGGCGGTTCCGGCGGCAAGACGTAAGGAATGGCGAC
 CCCAGCAGTGTGCTCCGGAGACTCGTCTCGTCCCGCTGCTGGAACACAAGGTGTTCCGCGTGGAGG
 GCAGCAGCGCCTTCTGGAGTGTGAGCCCCGCTGCTGCAGGCGCGCTGGAGTGGACTTCCAGCGCGC
 AGGGGTGACAGCCACACCCAGGTGCTGGCAGAGGAGCGCACCGAGCGCACCGCCCGGGGACTACTGCTG
 CGCAGGCTGCGGCGCCGGGACTCGGGCGTACTTGTGCGCCCGCTCGAGCAGGGCTTTACGCAACCGC
 TGCGTGCCTGTGCTGCACGTGTTGAGTGTACGCAGGCCGAACGACTGGCGGGGCCGAGGAGGCTGC
 GCCCGCGCGCCCGGGCCCAAACTCTGGTACCGGGACTTTCTGCAGCTGGTGGAGCCGGGCGGAGGT
 GGCAGCGCAACTCCCTGCGCATGTGCCGCCGACGCTGCGCTGCAGTCACTGCCCTGGAGTCCGCGGA
 GAAAGGGCCGTAACCGGAGGACCCACGCCCTGAGCCTCGCGCTGAGCGGGGCCGCGCAGCGCAACGCA
 CTGG

ACGCGTACGCGGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC202875 representing NM_001005914
Red=Cloning site Green=Tags(s)

MGRAGAAAVIPGLALLWAVGLGSAAPSPRLRLSFQELQAWHGLQTFSLERTCCYQALLVDEERGRLFVG
 AENHVASLNLNLSKRKRLWAPVVEWREECNWAGKDIGTECMNFVKLLHAYNRTHLLACGTGAFHPTC
 AFVEVGHRAEEPVLRLDPGRIEDGKGGKSPYDPRHRAASVLVGEELYSGVAADLMGRDFTIFRSLGQRPSL
 RTEPHDSRWLNEPKFVKVFWIPESENPDDDKIYFFRETAVEAAPALGRLSVSRVGIQRNDVGGQRSLV
 NKWTTFLKARLVCSVPGVEGDTHFDQLQDVFLSSRDHRTPLLYAVFSTSSIFQGSAVCVYMSNDVRRAF
 LGPFAHKEGPMHQWVSYQGRVYPRPGMCPSTFTGTFSSTKDFPDDVIQFARNHPLMYSVLPTGGRPLF
 LQVGANYTFTQIAADRVAADGHYDVLFIGTDVGTVLKVISVPGKSRPSAEGLLLEELHVFEDSAAVTSM
 QISSKRHLQYVAVRSVAQIALHRCAAHGRVCTECLARDPYCAWDGVACTRFQPSAKRRFRQDVRNGD
 PSTLCSGSSRPALLEHKVFGVEGSSAFLECEPRSLQARVEWTFQRAGVTAHTQVLAERTERTARGLLL
 RRLRRRDSGVYLCAAVEQGFTQPLRRLSLHVLSATQAERLARAEEAAPAPPKPLWYRDFLQVLEPGGG
 GSANSLMCRPQPALQSLPLESRKGRNRRTHAPEPRAERGPRSAATHW

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8112_e05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001005914

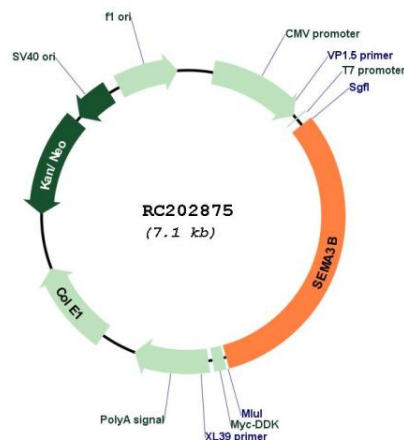
ORF Size: 2244 bp

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](#)

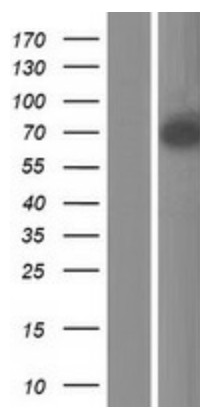
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:	<ol style="list-style-type: none"> 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:	<u>NM_001005914.2</u>
RefSeq Size:	2986 bp
RefSeq ORF:	2247 bp
Locus ID:	7869
UniProt ID:	<u>Q13214</u>
Cytogenetics:	3p21.31
Protein Families:	Secreted Protein, Transmembrane
Protein Pathways:	Axon guidance
MW:	83.03 kDa
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 RC202875



Western blot validation of overexpression lysate (Cat# [LY423670]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202875 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).