

Product datasheet for **RC213681**

Semaphorin 3A (SEMA3A) (NM_006080) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Semaphorin 3A (SEMA3A) (NM_006080) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Semaphorin 3A |
| Synonyms: | coll-1; COLL1; HH16; Hsema-I; Hsema-III; SEMA1; SEMAD; SEMAIII; SEMAL; SemD |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide
Sequence:

>RC213681 representing NM_006080
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGGGCTGGTAACTAGGATTGTCTGTCTTTCTGGGAGTATTACTTACAGCAAGACAACTATCAGA
ATGGGAAGAACAATGTGCCAAGGCTGAAATTATCTACAAAGAAATGTTGGAATCCAACAATGTGATCAC
TTTCAATGGCTTGGCCAACAGCTCCAGTTATCATACCTTCCTTTTGGATGAGGAACGGAGTAGGCTGTAT
GTTGGAGCAAAGGATCACATATTTTCATTGACCTGGTTAATATCAAGGATTTTCAAAGATTGTGTGGC
CAGTATCTTACACCAGAAGAGATGAATGCAAGTGGGCTGGAAAAGACATCCTGAAAGAATGTGCTAATTT
CATCAAGTACTTAAGGCATATAATCAGACTCACTTGTACGCCTGTGGAACGGGGCTTTTCATCCAATT
TGCACCTACATTGAAATGGACATCATCCTGAGGACAATATTTTAAAGCTGGAGAACTCACATTTTGAAA
ACGGCCGTGGGAAGAGTCCATATGACCCTAAGCTGCTGACAGCATCCCTTTTAAATAGATGGAGAATTATA
CTCTGAACTGCAGCTGATTTTATGGGGCGAGACTTTGCTATCTCCGAACCTTTGGGCACCACCACCCA
ATCAGGACAGAGCAGCATGATTCAGGTGGCTCAATGATCCAAAGTTCATTAGTGCCACCTCATCTCAG
AGAGTGACAATCCTGAAGATGACAAAGTATACTTTTTCTCCGTGAAAATGCAATAGATGGAGAACACTC
TGGAAAAGCTACTCACGTAGAATAGGTCAGATATGCAAGAATGACTTTGGAGGGCACAGAAGTCTGGTG
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ATTTTGATGAACTGCAGGATGTATTCTAATGAACTTTAAAGATCCTAAAAATCCAGTTGTATATGGAGT
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GTGTTCCCTTGGTCCATATGCCCACAGGGATGGACCAACTATCAATGGGTGCCTTATCAAGGAAGAGTCC
CCTATCCACGGCCAGGAACCTTGTCCAGCAAAACATTTGGTGGTTTTGACTCTACAAAGGACCTTCTGTA
TGATGTTATAACCTTTGCAAGAAGTCATCCAGCCATGTACAATCCAGTGTTCCTATGAACAATCGCCCA
ATAGTGATCAAAACGGATGTAATTTATCAATTTACACAAATTTGTCGTAGACCGAGTGGATGCAGAAGATG
GACAGTATGATGTTATGTTTATCGGAACAGATGTTGGGACCGTCTTAAAGTAGTTTCAATTCCTAAGGA
GACTTGGTATGATTTAGAAGAGGTTCTGCTGGAAGAAATGACAGTTTTTTCGGAACCGACTGCTATTTCA
GCAATGGAGCTTCCACTAAGCAGCAACAATAATATTGGTTCAACGGCTGGGTTGCCAGCTCCCTT
TACACCGGTGTGATATTTACGGGAAAGCGTGTGCTGAGTGTGCTCGCCGAGACCCCTTACTGTGCTTG
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GGAGACCCACTGACTCACTGTTTCAAGCTTACACCATGATAATCACCATGGCCACAGCCCTGAAGAGAGAA
TCATCTATGGTGTAGAGAATAGTAGCACATTTTGGAAATGCAGTCCGAAGTCGCAGAGAGCGCTGGTCTA
TTGGCAATTCAGAGGCGAAATGAAGAGCGAAAAGAAGAGATCAGAGTGGATGATCATATCATCAGGACA
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ATGGGTTCCATACAACTCTTCTTAAAGGTAACCTGGAAGTCATTGACACAGAGCATTTGGAAGAACTTCT
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GTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC213681 representing NM_006080
Red=Cloning site Green=Tags(s)

MGWLTRIVCLFWGVLLTARANYQNGKNNVPRCLKLSYKEMLESNNVITFNGLANSSSYHTFLLDEERSRLY
VGAKDHIFSFDLVNIKDFQKIVWPVSYTRRDECKWAGKDILKECANFIKVLKAYNQTHLYACGTGAFHPI
CTYIEIGHHPEDNIFKLENSHFENGRGKSPYDPKLLTASLLIDGELYSGTAADFMRDFAIFRTLGHHP
IRTEQHDSRWLNDPKFISAHLISESDNPEDDKVYFFRENAIDGEHSGKATHARIGQICKNDFGGHRSV
NKWTTFLKARLICSVPGPNGIDTHFDELQDVFLMNFKDPKNPVVYGVFTTSSNIFKGSAVCMYSMSDVR
VFLGPYAHRDGPYQWVPYQGRVYPRPGTSPKTFGGFDSTKDLRDDVITFARSHPAMYNPVFPMMNRP
IVIKTDVNYQFTQIVVDRVDAEDGQYDVMFIGTDVGTVLKVVSIKPKETWYDLEEVLLLEMTVFREPTAIS
AMELSTKQQQLYIGSTAGVAQLPLHRCDIYGKACAECLARDPYCAWDGSACSRYPYPTAKRTRRRQDIRN
GDPLTHCSDLHHDNHHGHSPEERIIYGVENSSTFLECSPKSQRALVYWQFQRRNEERKEEIRVDDHIIRT
DQGLLLRSLQQKDSGNYLCHAVEHGFITLLKVTLEVIDTEHLEELLHKDDDDGSGKTKEMSNSMTPSQK
VWYRDFMQLINHPNLNTMDEFCEQVWKRDRKQRRQRPGHTPGNSNKWKHLQENKKGRRNRRTHEFERAPRS
V

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6716_a10.zip

Restriction Sites: Sgfl-Mlul

Cloning Scheme:


ACCN: NM_006080

ORF Size: 2313 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_006080.1](#), [NP_006071.1](#)

RefSeq Size: 2530 bp

RefSeq ORF: 2316 bp

Locus ID: 10371

UniProt ID: [Q14563](#)

Cytogenetics: 7q21.11

Domains: Sema, ig, IG, PSI

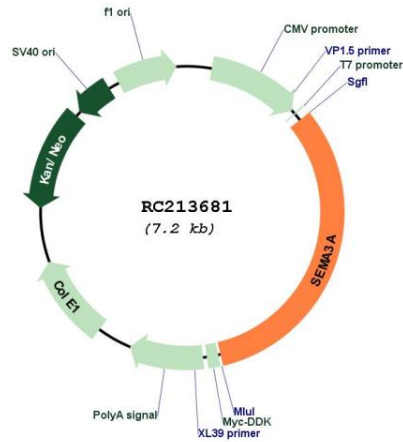
Protein Families: Secreted Protein

Protein Pathways: Axon guidance

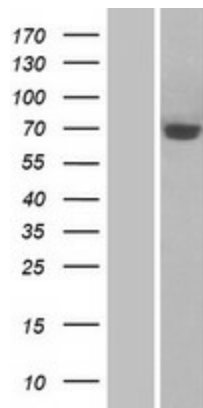
MW: 88.89 kDa

Gene Summary: This gene is a member of the semaphorin family and encodes a protein with an Ig-like C2-type (immunoglobulin-like) domain, a PSI domain and a Sema domain. This secreted protein can function as either a chemorepulsive agent, inhibiting axonal outgrowth, or as a chemoattractive agent, stimulating the growth of apical dendrites. In both cases, the protein is vital for normal neuronal pattern development. Increased expression of this protein is associated with schizophrenia and is seen in a variety of human tumor cell lines. Also, aberrant release of this protein is associated with the progression of Alzheimer's disease. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC213681



Western blot validation of overexpression lysate (Cat# [LY416877]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213681 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).