

Product datasheet for **SC323843**

Semaphorin 4D (SEMA4D) (NM_006378) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 4D (SEMA4D) (NM_006378) Human Untagged Clone
Tag:	Tag Free
Symbol:	Semaphorin 4D
Synonyms:	A8; BB18; C9orf164; CD100; coll-4; COLL4; GR3; M-sema-G; SEMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_006378.2
GCTGTAACACTCACCGTGAAGGTCTGCAGCTTCACTCCCGAGCCAGCGAGACCACGAACC
CACCAGAAGGAAGAACTCTGAACACATCTGAACATCAGAAGGGACAGACTCCAGACGG
CCACCCTCTGCTAACACCAGATAGTGGAAAGAAACCATGTGCTGAAATGTTTGACGACA
CTGATGGTTTGACTCTGCTAACTGGAATGGCTTATTGTGCAAGAAAGTACACCTGGTCGG
GTCCTGGGGCTCATCTCTAGCACCAGCAAAGATTTCTGAAGACGCTTTTCTAGAAATGAC
TGGAAAGTTTCAAGAGGCATAAGATACAGCATTCTTCTGAGGCCCTGAAGAAATCAA
GTGGGCTTTGACATTGCGGTGGTGAGAGCGACCCCTCCTCACCTGGAGAAGTGGGAAATG
TGGATTCTCAGGGACCGCTGTTACAGAGCTCCAGGCTGTGCTGCTGGCCCTGGTCCTG
GGGCGTGAAGCCCTGGGGTCCGCTCTACCTGATGAGGATGTGCACCCCAATTAGGGGGC
TGCTCATGGCCCTTGCAAGTGTGTTGGGACAGCGATGGCATTTCACCCATACCCCGGA
TCACCTGGGAGCAGAGAGGTGCACCTGGTGCAGTTTCATGAGCCAGACATCTACAAC
ACTCAGCCTTGCTGCTGAGCGAGGACAAGGACACCTTGTACATAGGTGCCCGGGAGGCGG
TCTTCGCTGTGAACGCACTCAACATCTCCGAGAAGCAGCATGAGGTGATTGGAAGGTCT
CAGAAGACAAAAAGCAAAATGTGCAGAAAAGGGGAAATCAAAACAGACAGAGTGCCTCA
ACTACATCCGGGTGCTGCAGCCACTCAGCGCCACTTCCCTTTACGTGTGTGGGACCAACG
CATTCCAGCCGGCCTGTGACCACCTGAACCTAACATCCTTTAAGTTTCTGGGAAAAATG
AAGATGGCAAAGGAAGATGTCCTTTGACCCAGCACACAGCTACACATCCGTCATGGTTG
ATGGAGAACTTTATTCGGGGACGTCGTATAATTTTTGGGAAGTGAACCCATCATCTCCC
GAAATTCTTCCCACAGTCTCTGAGGACAGAATATGCAATCCCTTGGCTGAACGAGCCTA
GTTTCGTGTTGCTGACGTGATCCGAAAAAGCCAGACAGCCCGACGGCGAGGATGACA
GGGTCTACTTCTTCTCACGGAGGTGTCTGTGGAGTATGAGTTTGTGTTCCAGGGTGTGA
TCCCACGGATAGCAAGAGTGTGCAAGGGGGACCAGGGCGGCTGAGGACCTTGCAGAAGA
AATGGACCTCCTTCTGAAAGCCCGACTCATCTGCTCCCGGCCAGACAGCGGCTTGGTCT
TCAATGTGCTGCGGGATGTCTTCGTGCTCAGGTCCCGGGCCTGAAGGTGCTGTGTTCT
ATGCACCTTTCACCCACAGCTGAACAACGTGGGGCTGTGGCAGTGTGCGCCTACAACC



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TGTCCACAGCCGAGGAGGTCTTCTCCCACGGGAAGTACATGCAGAGCACCACAGTGGAGC
 AGTCCCACACCAAGTGGGTGCGCTATAATGGCCCGGTACCCAAGCCGCGCCTGGAGCGT
 GCATCGACAGCGAGGCACGGGCCCAACTACACCAGCTCCTTGAATTTGCCAGACAAGA
 CGCTGCAGTTCGTTAAAGACCACCTTTGATGGATGACTCGGTAACCCCAATAGACAACA
 GGCCAGGTTAATCAAGAAAGATGTGAACTACACCAGATCGTGGTGGACCGGACCCAGG
 CCCTGGATGGGACTGTCTATGATGTCATGTTTGTGACACAGACCCGGGGAGCTCTGCACA
 AAGCCATCAGCCTCGAGCACGCTGTTACATCATCGAGGAGACCCAGCTTCCAGGACT
 TTGAGCCAGTCCAGACCTGCTGTCTTCAAAGAAGGCAACAGGTTTGTCTATGCTG
 GCTCTAACTCGGGCGTGGTCCAGGCCCGCTGGCCTTCTGTGGGAAGCACGGCACCTGCG
 AGGACTGTGTGCTGGCGCGGACCCCTACTGCGCCTGGAGCCCGCCACAGCGACCTGCG
 TGGCTCTGCACCAGACCGAGAGCCCGAGAGGGGTTTGATTAGGAGATGAGCGGCGATG
 CTTCTGTGTGCCCGATAAAAAGTAAAGGAAGTTACCGGCAGCATTTTTTCAAGCACGGT
 GCACAGCGGAAGTGAATGCTCCAAAAATCCAACCTGGCCCGGGTCTTTTGAAGTTCC
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 CCTCTCCGGGGCCATCACCTTCTCCAAGCCTGCGCCACCGGCACATCCTGCGAAC
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 TCTTTTTCTAACTGCTATAAGGGATACCTGCCAGACAGTGTGAAATTCGGCTCGG
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 AGGAGACGTTAGTAGAGCCAGGGAGCTTCTCCAGCAGAATGGGGAGCACCCCAAGCCAG
 CCTGGACACCGGCTATGAGACCGAGCAAGACACCATCACAGCAAGTCCCCACGGATA
 GGGAGGACTCACAGAGGATCGACGACCTTCTGCCAGGGACAAGCCCTTGGACGCAAGT
 GTGAGCTGAAGTTCGCTGACTCAGACGCAGATGGAGACTGAGGCCGGCTGTGCATCCCCG
 CTGGTGCCTCGGCTGCGACGTGTCCAGGCGTGGAGAGTTTTGTGTTTCTCCTGTTAGTA
 TCCGAGTCTCGTGCAGTGTGCTAGGTTAGCCCGCATCGTGCAGACAACCTCAGTCTC
 TTGTCTATTTCTTGGGTTGAGCCTGTGACTTGGTTTTCTTGTCTTTTGGAAAAA
 TGACAATCCTTGATCCAGTCTTGTGTTCCGAAGTCAGTCGGAGTACTGAAGAAGGCC
 CACGGGGGGCACGGAGTCTGAGCCCTTCTGTAGTGGGGAAAGGTGGCTGGACCTCT
 GTTGGCTGAGAAGAGCATCCCTTCACTTCCCCTCCCCGTAGCAGCCACTAAAAGATTAT
 TTAATTCAGATTGAAAATGACATTTTAGTTTATCAGATTGGTAACTTATCGCCTGTTGT
 CCAGATTGGCAGCAACCTTTTCTCCACTTAATATTTTTTTAGGATTTTGTCTTGATTG
 TGTTTATGTCATGGGTCATTTTTTTTTAGTTACAGAAGCAGATGTGTTAATTTAGAAG
 AAGATGTATATCTCCAGATTTTGTATATATTTGGCATAAAAACGGCTTACGTTGCTT
 AAGATTCTCAGGATAAACTTCTTTTGCTAAATGCATTCTTTCTGCTTTTAGAAATGTA
 GACATAAACACTCCCGGAGCCCACTCACCTTTTTTCTTTTTTTTTTTTTTTTTAACT
 TTATTCCTTGAGGAAGCATTGTTTTTGGAGAGATTTTCTTTCTGTACTTCGTTTTACTT
 TCTTTTTTTTTAACTTTTACTCTCTCGAAGAAGAGGACCTTCCCACATCCACGAGGTGG
 GTTTTGGCAAGGGAAGGTAGCCTGGATGAGCTGAGTGGAGCCAGGCTGGCCAGAGCTG
 AGATGGGAGTGGGTACAATCTGGAGCCACAGCTGTGCGTCAGAACCTCCTGTGAGACA
 GATGGAACCTTACAAGGGCGCCTTTGGTTCTCTGAACATCTCCTTTCTTCTTCTGCTC
 AATTGCATACCCACTGCCTGCCAGACTTTCTATCCAGCCTCACTGAGCTGCCACTACT
 GGAAGGGAAGTGGCCTCGGTGGCCGGGCGGAGCTGTGACCACAGCACCCCTCAAGCA
 TACGGCGCTGTTCTGCCACTGTCTGAAGATGTGAATGGTGGTACGATTTCAACTG
 GTTAATTTCACTCCATCTCCCGCTTTGTAATACCCATCGGGAAGAGACTTTTTTTTC
 CATGGTGAAGAGCAATAAATCTGGATGTTTGTGCGCGTGTGGACAGTCTTATCTTCC
 AGCATGATAGGATTTGACCATTTTGGTGTAAACATTTGTGTTTTATAAGATTTACCTTGT
 TTTTATTTTTCTACTTTGAATTGTATACATTTGGAAAGTACCCAAATAAATGAGAAGCTT
 CTATCCTTAAA

Restriction Sites:	ECoRI-NOT
ACCN:	NM_006378
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	NM_006378.2 , NP_006369.2
RefSeq Size:	4675 bp
RefSeq ORF:	2589 bp
Locus ID:	10507
UniProt ID:	Q92854
Cytogenetics:	9q22.2
Domains:	Sema, PSI, ig, IG, PSI
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Axon guidance

Gene Summary:

Cell surface receptor for PLXNB1 and PLXNB2 that plays an important role in cell-cell signaling (PubMed:20877282). Regulates GABAergic synapse development (By similarity). Promotes the development of inhibitory synapses in a PLXNB1-dependent manner (By similarity). Modulates the complexity and arborization of developing neurites in hippocampal neurons by activating PLXNB1 and interaction with PLXNB1 mediates activation of RHOA (PubMed:19788569). Promotes the migration of cerebellar granule cells (PubMed:16055703). Plays a role in the immune system; induces B-cells to aggregate and improves their viability (in vitro) (PubMed:8876214). Induces endothelial cell migration through the activation of PTK2B/PYK2, SRC, and the phosphatidylinositol 3-kinase-AKT pathway (PubMed:16055703). [UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1).