

## Product datasheet for RC224394

### SEMA6D (NM\_020858) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SEMA6D (NM_020858) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SEMA6D
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC224394 representing NM_020858 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGATCGCC

ATGAGGGTCTTCCTGCTTTGTGCCTACATACTGCTGCTGATGGTTCCAGTTGAGGGCAGTCAGCTTTC  
CTGAAGATGATGAACCCCTTAATACTGTCGACTATCACTATTCAAGGCAATATCCGGTTTTAGAGGACG  
CCCTTCAGGCAATGAATCGCAGCACAGGCTGGACTTTCAGCTGATGTTGAAAATTCGAGACACACTTTAT  
ATTGCTGGCAGGGATCAAGTTTATACAGTAACTTAAATGAAATGCCCAAACAGAAAGTAATACCCAACA  
AGAAACTGACATGGCGATCAAGACAACAGGATCGAGAAAAGTGTCTATGAAAGGCAAGCATAAAGATGA  
ATGCCACAACCTTATCAAAGTATTTGTTCCAAGAAACGATGAGATGGTTTTGTTGTGGTACCAATGCA  
TTCAATCCCATGTGTAGATACTACAGGTTGAGTACCTTAGAATATGATGGGGAAGAAATAGTGGCCTGG  
CAAGATGCCCATTTGATGCCAGACAAACCAATGTTGCCCTCTTTGCTGATGGGAAGCTGTATTCTGCCAC  
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ATAAAATATGATCCAAATGGATAAAAGAGCCACACTTTCTTCATGCCATAGAATATGGAACTATGTCT  
ATTTCTTCTTTGAGAAATCGCTGTGCAACATAATAATTTAGGCAAGGCTGTGTATCCCGCGTGGCCCG  
CATATGTAAAAACGACATGGGTGGTCCAGCGGGTCTGGAGAAACACTGGACTTCATTTCTAAAGGCT  
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TGTCTGTGCATTTAGCATGGATGACATTGAAAAAGTATTCAAAGGACGGTTAAGGAACAGAAAACCTCA  
GATTCTGTTTGGCAGCAGTTCCTCGAAGACAAAGTGCCAAAGCCAAGGCCTGGCTGTTGTGCAAAACAG  
GCCTTGCCGAAGCTTATAAAACCTCCATCGATTTCCCGGATGAACTCTGTCATTCATCAAATCTCATCC  
CCTGATGGACTCTGCCGTTCCACCCATTGCCGATGAGCCCTGGTTCACAAAGACTCGGGTCAGGTACAGA  
CTGACGGCCATCTCAGTGGACCATTCAGCCGGACCCTACCAGAACTACACAGTCATCTTTGTTGGCTCTG  
AAGCTGGCATGGTACTTAAAGTTCTGGCAAAGACCAGTCCTTTCTTTTGAACGACAGCGTATTACTGGA  
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GCTGTGAGCGTTATGGATCATGTAAAAAGTCTTGATTGCATCTCGTGACCCGATTGTGGCTGGTTAAG  
CCAGGGATCCTGTGGTAGAGTGACCCAGGGATGCTGCTGTTAACCGAAGACTTCTTTGCTTTCCATAAC



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CACAGTGTGAAGGATATGAACAAGACACAGAATTCGGCAACACAGCTCATCTAGGGGACTGCCATGGT  
TACGATGGGAAGTCCAGTCTGGAGAGTCCAACCAGATGGTCCACATGAATGTCCTCATCACCTGTGTCTT  
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GGCAACCTCCAGAGTTGGCTCTTCTACTCCTGAGTCTACACCCGTCTTACCAGAAGACCCTGC  
AGGCCATGAAGAGCCACTCAGAAAAGGCCATGGCCATGGAGCTCAAGGAAAGAAACCCCTCAGTTTTT  
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GCTACCCATGACTACAACACGTCTTTCTCAAACCTCAATGCTCACAAAGCTGAAAAGAAGCTTCAAACA  
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CAATGATCTCCTGAAGCATCTGAATGACCCAAATAGTAACCCAAAGCCATCATGGGAGACATCCAGATG  
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TCTATATCTGCTATGCCTAAAACTTAAACTCACCAATGGTGTGTTTGTATCCAGACAGCTAGTATGA  
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TCATCTGCAGCCTTCCCTCTCCAGACAGAGCAGCTACACCAGTAATGGCACTCTTCTAGGACGGGACTA  
AAGAGGACGCCGCTTAAAACTGACGTGCCACCAAGCCTTCTTTGTTCTCAAACCCATCTGTCA  
GACCACTGAACAAATACACATAC

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC224394 representing NM\_020858  
Red=Cloning site Green=Tags(s)

MRVFLLCAYILLMLMVSQRLRAVSFPEDEPLNTVDYHYSRQYVFRGRPSGNEHQHRLDFQLMLKIRDTLY  
IAGRDQVYTVNLNEMPKTEVIPNKKLTWRSRQDRENCAMKGGKHKDECHNF IKVFVPRNDEMVFVCGTNA  
FNPMCRYRLLSTLEYDGEEISGLARCPFDARQTNVALFADGKLYSATVADFLASDAVIYRSMGDGSALRT  
IKYDSKWIKEPHFLHAIEYGNVYFFFREIAVEHNNLGAVYSRVARICKNDMGGSQRVLEKHWTSFLKA  
RLNCSVPGDSFFYFDVLQSIITDIQINGIPTVVGFTTQLNSIPGSAVCAFMSDDIEKVFGRFKEQKTP  
DSVWTAVPEDKVPKPRPGCCAKHGLAEAYKTSIDFPDEL SFIKSHPLMDSAVPPIADEPWFTKTRVRYR  
LTAISVDHSAGPYQNYTVIFVGSEAGMVLKVLAKTSPFSLNDSVLLLEEIEAYNHAKCSAENEEDKKVISL  
QLDKDHHALYVAFSSCIIRIPLSRCERYGSCCKSCIASRDPYCGWL SQGSCGRVTPGMLLLTEDFFAFHN  
HSAEGYEQDTEFGNTAHLGDCHGVRWEVQSGESNQMVHMNVLITCVFAAFVLGAFIAGVAVYCYRDMFVR  
KNRKIHKDAESAQSCTDSSGSFAKLNGLFDSPVKEYQQNIDSPKLYSNLLTSRKELPPNGDTKSMVMDHR  
GQPPPELALPTPESTPVLHQKTLQAMKSHSEKAHGHGASRKETPQFFPSSPPPHSPLSHGHIPSAIVLPN  
ATHDYNTSFSNSNAHKAIEKLLQNDHPLTKSSSRDHRRSVDSRNTLNDLLKHLNDPNSNPKAIMGDIQM  
AHQNLMLDPMGSMSEVPPKVPNREASLYSPSTLPRNSPTKRVDVPTTPGVPMTSLERQRYHKNSSQRH  
SISAMPKLNPNVLLSRQPSMNRGGYMPPTGAKVDYIQGTPVSVHLQPSLSRQSSYSNGTLPRGTGL  
KRTPSLKPDVPPKPSFVPTPSVRPLNKYTY

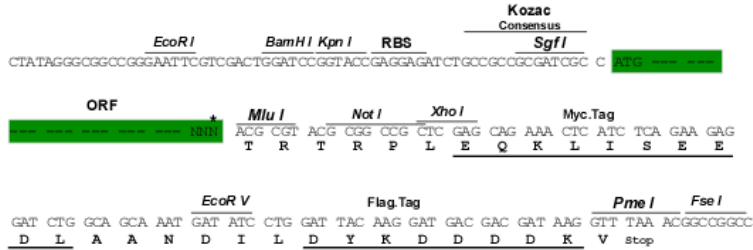
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

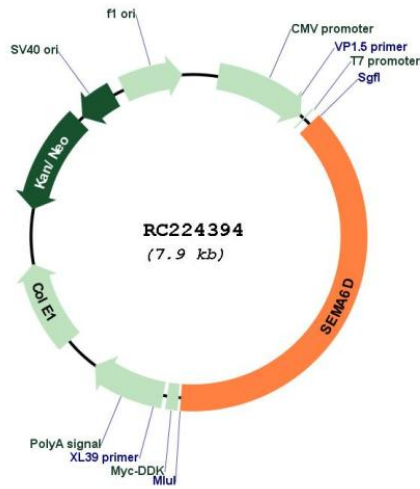
**Cloning Scheme:**

Cloning sites used for ORF Shutting:



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

**Plasmid Map:**



ACCN: NM\_020858  
 ORF Size: 3033 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	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_020858.2</a>
<b>RefSeq Size:</b>	5923 bp
<b>RefSeq ORF:</b>	3036 bp
<b>Locus ID:</b>	80031
<b>UniProt ID:</b>	<a href="#">Q8NFY4</a>
<b>Cytogenetics:</b>	15q21.1
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Axon guidance
<b>MW:</b>	110.8 kDa
<b>Gene Summary:</b>	Semaphorins are a large family, including both secreted and membrane associated proteins, many of which have been implicated as inhibitors or chemorepellents in axon pathfinding, fasciculation and branching, and target selection. All semaphorins possess a semaphorin (Sema) domain and a PSI domain (found in plexins, semaphorins and integrins) in the N-terminal extracellular portion. Additional sequence motifs C-terminal to the semaphorin domain allow classification into distinct subfamilies. Results demonstrate that transmembrane semaphorins, like the secreted ones, can act as repulsive axon guidance cues. This gene encodes a class 6 vertebrate transmembrane semaphorin that demonstrates alternative splicing. Several transcript variants have been identified and expression of the distinct encoded isoforms is thought to be regulated in a tissue- and development-dependent manner. [provided by RefSeq, Nov 2010]