

Product datasheet for **MR210512**

Sema4a (NM_001163489) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sema4a (NM_001163489) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Sema4a
Synonyms:	A132332; Semab; SemB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR210512 representing NM_001163489
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCCCTACCATCCCTGGGCCAGGACTCATGGAGTCTCCTGCGTGTTCCTTCCAACCTCTCTCTG
 TGCCATCACTGCCACCTGCTTCTGGGACTGGTGGTCAGGGGCCATGCCAGAGTCAAATACCATGCTGG
 AGACGGGCACAGGGCCCTCAGCTTCTTCCAACAAAAAGGCCTCCGAGACTTTGACACGCTGCTCCTGAGT
 GACGATGGCAACACTCTCTATGTGGGGCTCGAGAGGCCGCTCTGGCCTTGAATATCCAGAACCAGGAA
 TCCAAGGCTAAAGAACATGATACCCTGGCCAGCCAGTGAGAGAAAAAGACCGAATGTGCCTTTAAGAA
 GAAGAGCAATGAGACACAGTGTTCACCTTCATTGAGTCTGGTCTTTACAATGCTACTCACCTCTAT
 GCCTGTGGGACCTTGCCTTCAGCCCTGCCTGTACCTTCATTGAACTCCAAGATTCCTCCTGTTGCCCA
 TCTTGATAGACAAGGTGATGGACGGGAAGGGCCAAAGCCCCTTTGACCCTGTTACAAGCACACAGCTGT
 CTTGGTCGATGGGATGCTTTATCCGGCACCATGAACAACCTTCTGGGCAGCGAGCCCATCTGATGCGG
 ACACTGGGATCCAGCCTGTTCTCAAGACTGACATCTTCTTACGCTGGCTGCACGCGGATGCCTCCTTCG
 TGGCAGCCATTCCATCCACCCAGGTCGTCTATTTCTTCTTTGAGGAGACAGCCAGCGAGTTTGACTTCTT
 TGAAGAGCTGTATATATCCAGGGTGGCTCAAGTCTGCAAGAACGACGTGGGCGGTGAAAAGCTGCTGCAG
 AAGAAGTGGACCACCTTCTCAAAGCCCAGTTGCTCTGCGCTCAGCCAGGGCAGCTGCCATTCAACATCA
 TCCGCCACGCGGTCTGCTGCCCGCATTCTCCCTCTGTTTCCCGCATCTACGCAGTCTTTACCTCCCA
 GTGGCAGTGTGGCGGACCAGGAGCTCAGCAGTCTGTGCCTTCTCTCACGGACATTGAGCGAGTCTTT
 AAAGGGAAGTACAAGGAGCTGAACAAGGAGACCTCCCGCTGGACCACTTACCGGGCTCAGAGGTCAGCC
 CGAGGCCAGGCAGTTGCTCCATGGGCCCTCCTCTGACAAAGCCTTGACCTTCATGAAGGACCATTTTCT
 GATGGATGAGCACGTGGTAGGAACACCCCTGCTGGTGAAGTCTGGTGTGGAGTACACACGGCTTGCTGTG
 GAGTCAGCTCGGGCCTTGATGGGAGCAGCCATGTGGTCATGTATCTGGGTACCTCCACGGGGTCCCTGC
 ACAAGGCTGTGGTGCCTCAGGACAGCAGTGCTTATCTCGTGGAGGAGATTCAGCTGAGCCCTGACTCTGA
 GCCTGTTGAAACCTGCAGCTGGCCCCCGCCAGGGTGCAGTGTTCAGGCTTCTCTGGAGGCATCTGG
 AGAGTTCCAGGGCCAATTGCAGTGTCTACGAGAGCTGTGTGGACTGTGTGCTTGCAGGGACCCTCACT
 GTGCCTGGGACCCTGAATCAAGACTCTGCAGCCTTCTGTCTGGCTCTACCAAGCCTTGAAGCAGGACAT
 GGAACGCGCAACCCGGAGTGGGTATGCACCCGTGGCCCATGGCCAGGAGCCCCGGCGTCAGAGCCCC
 CCTCAACTAATTAAGAAGTCTGACAGTCCCCAACTCCATCCTGGAGCTGCCCTGCCCCACCTGTCAG
 CACTGGCCTCTTACCACTGGAGTCATGGCCGAGCCAAAATCTCAGAAGCCTCTGCTACCGTCTACAATGG
 CTCCTCTTGCTGCTGCCGAGGATGGTGTGCGGGCCTCTACCAAGTGTGTGGGACTGAGAACGGCTAC
 TCATACCTGTGGTCTCCTATTGGGTAGACAGCCAGGACCAGCCCTGGCGCTGGACCCTGAGCTGGCGG
 GCGTTCGCCGTGAGCGTGTGCAGGTCCCCTGACCAGGGTCGGAGGCGGAGCTTCCATGGCTGCCAGCG
 GTCCTACTGGCCCCATTTCTCATCGTTACCGTCTCCTGGCCATCGTGTCTCTGGGAGTGTCTACTCTC
 CTCCTCGCTTCCCCTGAGGCGCTGCGGGCTCGGGTAAGGTTCAAGGCTGTGGGATGCTGCCCCCA
 GGGAAAAGGCTCCACTGAGCAGGACCAGCACCTCCAGCCCTCCAAGGACCACAGGACCTCTGCCAGTGA
 CGTAGATGCCACAACAACCATCTGGGCGCCGAAGTGGCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTAA

Protein Sequence: >MR210512 representing NM_001163489
 Red=Cloning site Green=Tags(s)

MALPSLGQDSWSLLRVFFFLFLLPSLPPASGTGGQGPMRKYHAGDGHRLSFFQKGLRDFDTLLLS
 DDGNTLYVGAREAVLALNIQNGIPRLKNMIPWPASERKKTECAFKKKSNETQCFNFI RVLVSYNATHLY
 ACGTFAFSPACTFIELQDSLILIDKVMGKGQSPFDPVHKHTAVLVDGMLYSGTMNFLGSEPILMR
 TLGSQPVLKTDIFLRWLHADASFVAAIPSTQVVYFFFEETASEFDFFEELYISRVAQVCKNDVGGKLLQ
 KKWTTFLLKAQLLCAQPGQLPFNIIRHAVLLPADSPSVSRIYAVFTSQWQVGGTRSSAVCAFSLTDIERVF
 KGKYKELNKETSRTTYRGSEVSPRPGSCSMGPDSSDKALTFMKDHFLMDEHVVGTPLLVKSQVEYTRLAV
 ESARGLDGSSHVVMYLGSTGSLHKAVVPQDSSAYLVEEIQSPDSEVVRNLQLAPAQGA VAGFSGGIW
 RYPRANC SVYESCVDCLARDPHCAWDPE SRLCSLLSGSTKPWKQDMERGNPEWVCTRGP MARSRRQSP
 PQLIKEVLTVPNSILELPCPHLSALASYHWSHGRAKISEASATVYNGSLLLL PQDVGGLYQCVATENGY
 SYPVVSYWVDSQDQPLALDPELAGVPRERVQVPLTRVGGGASMAAQRSYWPHFLIVTVLLAIVLLGLVTL
 LLASPLGALRARGKVQCGMLPPREKAPLSRDQHLQPSKDHRTSASDVDADNNHLGAEVA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_001163489

ORF Size: 2280 bp

OTI Disclaimer: 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.

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_001163489.1](#), [NP_001156961.1](#)

RefSeq Size: 3046 bp

RefSeq ORF: 2283 bp

Locus ID: 20351

UniProt ID: [Q62178](#)

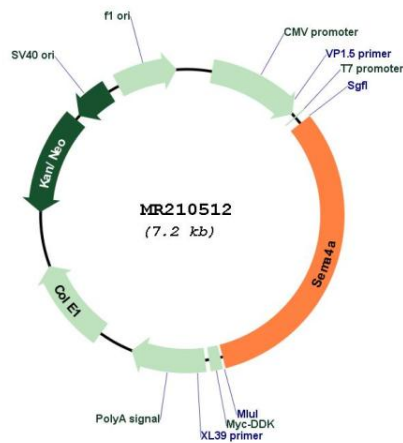
Cytogenetics: 3 F1

MW: 83.4 kDa

Gene Summary:

Cell surface receptor for PLXNB1, PLXNB2, PLXNB3 and PLXND1 that plays an important role in cell-cell signaling (PubMed:20043131, PubMed:17318185). Regulates glutamatergic and GABAergic synapse development (PubMed:29981480). Promotes the development of inhibitory synapses in a PLXNB1-dependent manner and promotes the development of excitatory synapses in a PLXNB2-dependent manner (PubMed:29981480). Plays a role in priming antigen-specific T-cells, promotes differentiation of Th1 T-helper cells, and thereby contributes to adaptive immunity (PubMed:15780988). Promotes phosphorylation of TIMD2 (PubMed:12374982). Inhibits angiogenesis (PubMed:17318185). Promotes axon growth cone collapse (PubMed:20043131). Inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons (PubMed:20043131).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR210512