

## Product datasheet for **MR217855**

### Sema4a (NM\_013658) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sema4a (NM_013658) 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:**

>MR217855 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGCCCTACCATCCCTGGGCCAGGACTCATGGAGTCTCCTGCGTGTTTTTTTCTTCCAACCTCTTCTGCTG  
 TGCCATCACTGCCACCTGCTTCTGGGACTGGTGGTCAGGGGCCATGCCAGAGTCAAATACCATGCTGG  
 AGACGGGCACAGGGCCCTCAGCTTCTTCCAACAAAAAGGCCTCCGAGACTTTGACACGCTGCTCCTGAGT  
 GACGATGGCAACTCTCTATGTGGGGGCTCGAGAGGCGCTCCTGGCCTTGAATATCCAGAACCAGGAA  
 TCCAAGGCTAAAGAACATGATACCCTGGCCAGCCAGTGAGAGAAAAAGACCGAATGTGCCTTTAAGAA  
 GAAGAGCAATGAGACACAGTGTTCACCTTCATTGAGTCTGGTCTTTACAATGCTACTCACCTCTAT  
 GCCTGTGGGACCTTGCCTTCAGCCCTGCCTGTACCTTATTGAACTCCAAGATTCCTCCTGTTGCCCA  
 TCTTGATAGACAAGGTGATGGACGGGAAGGGCCAAAGCCCCTTTGACCCTGTTACAAGCACACAGCTGT  
 CTTGGTCGATGGGATGCTTTATTCGGCACCATGAACAACCTTCTGGGCAGCGAGCCCATCTGATGCGG  
 ACACTGGGATCCAGCCTGTTCTCAAGACTGACATCTTCTTACGCTGGCTGCACGCGGATGCCTCCTTCG  
 TGGCAGCCATTCCATCCACCCAGGTCGTCTATTTCTTCTTTGAGGAGACAGCCAGCGAGTTTGACTTCTT  
 TGAAGAGCTGTATATATCCAGGGTGGCTCAAGTCTGCAAGAACGACGTGGGCGGTGAAAAGCTGCTGCAG  
 AAGAAGTGGACCACCTTCTCAAAGCCAGTTGCTCTGCGCTCAGCCAGGGCAGCTGCCATTCAACATCA  
 TCCGCCACGCGGTCTGCTGCCCGCATTCTCCCTCTGTTTCCCGCATCTACGAGTCTTTACCTCCCA  
 GTGGCAGTGTGGCGGACCAGGAGCTCAGCAGTCTGTGCCTTCTCTCACGGACATTGAGCGAGTCTTT  
 AAAGGGAAGTACAAGGAGCTGAACAAGGAGACCTCCCGCTGGACCACTTACCGGGCTCAGAGGTCAGCC  
 CGAGGCCAGGCAGTTGCTCCATGGGCCCTCCTCTGACAAAGCCTTGACCTTCAAGAGGACCATTTTCT  
 GATGGATGAGCAGTGGTAGGAACACCCCTGCTGGTGAAGTCTGGTGTGGAGTACACACGGCTTGCTGTG  
 GAGTCAGCTCGGGCCTTGATGGGAGCAGCCATGTGGTCATGTATCTGGGTACCTCCACGGGGTCCCTGC  
 ACAAGGCTGTGGTGCCTCAGGACAGCAGTGCTTATCTCGTGGAGGAGATTGAGTGCAGCCCTGACTCTGA  
 GCCTGTTGAAACCTGCAGCTGGCCCCCGCCAGGGTGCAGTGTTCAGGCTTCTCTGGAGGCATCTGG  
 AGAGTTCCAGGGCAATTGCAGTGTCTACGAGAGCTGTGTGGACTGTGTGCTTGCAGGGACCCTCACT  
 GTGCTGGGACCCTGAATCAAGACTCTGCAGCCTTCTGTCTGGCTCTACCAAGCCTTGAAGCAGGACAT  
 GGAACGCGCAACCCGGAGTGGGTATGCACCCGTGGCCCATGGCCAGGAGCCCCGGCGTCAGAGCCCC  
 CCTCAACTAATTAAGAAGTCTGACAGTCCCCAACTCCATCCTGGAGCTGCCCTGCCCCACCTGTCAG  
 CACTGGCCTCTTACCACTGGAGTCATGGCCGAGCCAAAATCTCAGAAGCCTCTGCTACCGTCTACAATGG  
 CTCCCTCTTGCTGCTGCCGAGGATGGTGTGCGGGCCTCTACCAAGTGTGTGGGACTGAGAACGGCTAC  
 TCATACCTGTGGTCTCCTATTGGGTAGACAGCCAGGACCAGCCCTGGCGCTGGACCCTGAGTGGCGG  
 GCGTTCGCCGTGAGCGTGTGCAGGTCCCCTGACCAGGGTCGGAGGCGGAGCTTCCATGGCTGCCAGCG  
 GTCCTACTGGCCCCATTTCTCATCGTTACCGTCTCCTGGCCATCGTGTCTCTGGGAGTGTCTACTCTC  
 CTCCTCGCTTCCCCTGAGGCGCTGCGGGCTCGGGTAAGGTTCAAGGCTGTGGGATGCTGCCCCCA  
 GGGAAAAGGCTCCACTGAGCAGGACCAGCACCTCCAGCCCTCCAAGGACCACAGGACCTCTGCCAGTGA  
 CGTAGATGCCACAACAACCATCTGGGCGCCGAAGTGGCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTAA

**Protein Sequence:** >MR217855 protein sequence  
 Red=Cloning site Green=Tags(s)

MALPSLGQDSWSLLRVFFFLFLLPSLPPASGTGGQGPMRKYHAGDGHRLSFFQKGLRDFDTLLLS  
 DDGNTLYVGAREAVLALNIQNGIPRLKNMIPWPASERKKTECAFKKKSNETQCFNFIRVLVSYNATHLY  
 ACGTFAFSPACTFIELQDSLILIDKVMGKQSPFDPVHKHTAVLVDGMLYSGMTMNNFLGSEPILMR  
 TLGSQPVLKTDIFLRWLHADASFVAIPSTQVVYFFFEETASEFDFFEELYISRVAQVCKNDVGGKLLQ  
 KKWTTFLKAQLLCAQPGQLPFNIIRHAVLLPADSPSVSRIYAVFTSQWQVGGTRSSAVCAFSLTDIERVF  
 KGKYKELNKETSRWTTYRGSEVSPRPGSCSMGPDSSDKALTFMKDHFMDHEHVVGTPLLVKSVEYTRLAV  
 ESARGLDGSSHVVMYLGSTGSLHKAVVPQDSSAYLVEEIQSPDSEPVRLQLAPAQGAVFAGFSGGIW  
 RYPRANCSVYESCVDCLARDPHCAWDPE SRLCSLLSGSTKPWKQDMERGNPEWVCTRGPMPARSPRRQSP  
 PQLIKEVLTVPNSILELPCPHLSALASYHWSHGRAKISEASATVYNGSLLLLQDQVGGGLYQCVATENGY  
 SYPVVSYWVDSQDQPLALDPELAGVPRERVQVPLTRVGGGASMAAQRSYWPHFLIVTVLLAIVLLGLVTL  
 LLASPLGALRARGKVQCGMLPPREKAPLSRDQHLQPSKDHRTSASDVDADNNHLGAEVA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_013658

**ORF Size:** 2280 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\\_013658.3](#), [NP\\_038686.3](#)

**RefSeq Size:** 3224 bp

**RefSeq ORF:** 2283 bp

**Locus ID:** 20351

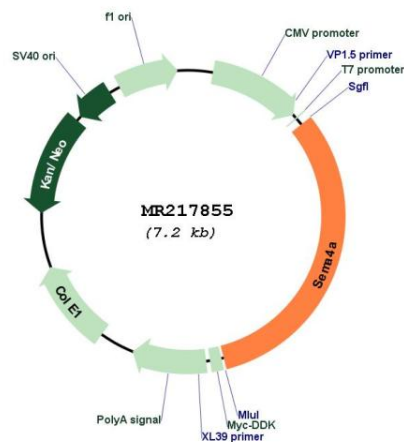
**UniProt ID:** [Q62178](#)

**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 MR217855