

Product datasheet for **MG217855**

Sema4a (NM_013658) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Sema4a (NM_013658) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sema4a
Synonyms:	A132332; Semab; SemB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG217855 representing NM_013658
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCCCTACCATCCCTGGGCCAGGACTCATGGAGTCTCCTGCGTGTTCCTTCCAACTCTTCTCTG
 TGCCATCACTGCCACCTGCTTCTGGGACTGGTGGTCAGGGGCCATGCCAGAGTCAAATACCATGCTGG
 AGACGGGCACAGGGCCCTCAGCTTCTTCCAACAAAAAGGCCTCCGAGACTTTGACACGCTGCTCCTGAGT
 GACGATGGCAACTCTCTATGTGGGGCTCGAGAGGCCGCTCTGGCCTTGAATATCCAGAACCAGGAA
 TCCCAAGGCTAAAGAACATGATACCCTGGCCAGCCAGTGAGAGAAAAAGACCGAATGTGCCTTTAAGAA
 GAAGAGCAATGAGACACAGTGTTCAACTTCATTGAGTCTGGTCTTTACAATGCTACTCACCTCTAT
 GCCTGTGGGACCTTGCCTTCAGCCCTGCCTGTACCTTATTGAACTCCAAGATTCCTCCTGTTGCCCA
 TCTTGATAGACAAGGTGATGGACGGGAAGGGCCAAAGCCCCTTTGACCCTGTTACAAGCACACAGCTGT
 CTTGGTCGATGGGATGCTTTATCCGGCACCATGAACAACCTTCTGGGCAGCGAGCCCATCTGATGCGG
 ACACTGGGATCCAGCCTGTTCTCAAGACTGACATCTTCTTACGCTGGCTGCACGCGGATGCCTCCTTCG
 TGGCAGCCATTCCATCCACCCAGGTCGTCTATTTCTTCTTTGAGGAGACAGCCAGCGAGTTTGACTTCTT
 TGAAGAGCTGTATATATCCAGGGTGGCTCAAGTCTGCAAGAACGACGTGGGCGGTGAAAAGCTGCTGCAG
 AAGAAGTGGACCCTTCTCAAAGCCAGTTGCTCTGCGCTCAGCCAGGGCAGCTGCCATTCAACATCA
 TCCGCCACGCGGTCTGCTGCCGCCGATTCTCCCTCTGTTTCCCGCATCTACGCAGTCTTTACCTCCCA
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 AAAGGGAAGTACAAGGAGCTGAACAAGGAGACCTCCCGCTGGACCACTTACCGGGCTCAGAGGTCAGCC
 CGAGGCCAGGCAGTTGCTCCATGGGCCCTCCTCTGACAAAGCCTTGACCTTCATGAAGGACCAATTTCT
 GATGGATGAGCACGTGGTAGGAACACCCCTGCTGGTGAAGTCTGGTGTGGAGTACACACGGCTTGCTGTG
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 GTGCTGGGACCCTGAATCAAGACTCTGCAGCCTTCTGTCTGGCTCTACCAAGCCTTGAAGCAGGACAT
 GGAACGCGCAACCCGGAGTGGGTATGCACCCGTGGCCCATGGCCAGGAGCCCCGGCGTCAGAGCCCC
 CCTCAACTAATTAAGAAGTCTGACAGTCCCCAACTCCATCCTGGAGCTGCCCTGCCCCACCTGTCAG
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 TCATACCTGTGGTCTCCTATTGGGTAGACAGCCAGGACCAGCCCTGGCGCTGGACCCTGAGCTGGCGG
 GCGTTCGCCGTGAGCGTGTGCAGGTCCCGCTGACCAGGGTCGGAGGCGGAGCTTCCATGGCTGCCAGCG
 GTCCTACTGGCCCCATTTCTCATCGTTACCGTCTCTGGCCATCGTGTCTCTGGGAGTGTCTACTCTC
 CTCCTCGCTTCCCCTGAGGCGCTGCGGGCTCGGGTAAGGTTCAAGGCTGTGGGATGCTGCCCCCA
 GGGGAAAGGCTCCACTGAGCAGGACCAGCACCTCCAGCCCTCCAAGGACCACAGGACCTCTGCCAGTGA
 CGTAGATGCCACAACAACCATCTGGGCGCCGAAGTGGCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG217855 representing NM_013658
 Red=Cloning site Green=Tags(s)

MALPSLGQDSWSLLRVFFFQLFLLPSLPPASGTGGQGPMPRVKYHAGDGHRALSFQKGLRDFDTLLLS
 DDGNTLYVGAREAVLALNIQNGIPRLKNMIPWPASERKKTECAFKKKSNETQCFNFIKLVSYNATHLY
 ACGTFAFSPACTFIELQDSSLLPILIDKVMGKQSPFDPVHKHTAVLVDGMLYSGMTMNNFLGSEPILMR
 TLGSQPVLKTDIFLRWLHADASFVAIIPSTQVVYFFFEETASEFDFFEELYISRVAQVCKNDVGGKLLQ
 KKWTTFLKAQLLCAQPGQLPFNIIRHAVLLPADSPSVSRIYAVFTSQWQVGGTRSSAVCAFSLTDIERVF
 KGKYKELNKETSRWTTYRGSEVSPRPGSCSMGPPSSDKALTFMKDHFMDHEHVVGTPLLVKSQVEYTRLAV
 ESARGLDGSSHVVMYLGSTGSLHKAVVPQDSSAYLVEEIQSPDSEVVRNLQLAPAQGAVFAGFSGGIW
 RYPRANCVYESCVDCLARDPHCAWDPE SRLCSLLSGSTKPKQDMERGNPEWVCTRGPMA SPRRQSP
 PQLIKEVLTVPNSILELPCPHLSALASYHWSHGRAKISEASATVYNGSLLLL PQDGVGGLYQCVATENGY
 SYPVVSYWVDSQDQPLALDPELAGVPRERVQVPLTRVGGGASMAAQRSYWPHFLIVTVLLAIVLLGLVTL
 LLASPLGALRARGKVQCGMLPPRGKAPLSRDQHLQPSKDHRTSASDVDADNNHLGAEVA

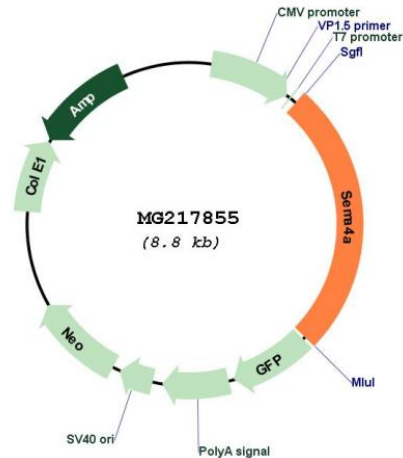
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


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_013658.2](#)

RefSeq Size: 3224 bp

RefSeq ORF: 2283 bp

Locus ID: 20351

UniProt ID: [Q62178](#)

Cytogenetics: 3 F1

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]