

## Product datasheet for **MG217141**

### Sema4b (NM\_013659) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Sema4b (NM_013659) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Sema4b
Synonyms:	mKIAA1745; Semac; SemC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG217141 representing NM\_013659  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGGCCGGGCGAGCCGCTCCGCTGTCTGCGGCGCGCTGCTGCTGCTGCTACTGCTGCTGCTGC  
 GGACGACGACTACGCGGGCGCTCGGCCCCGGATCAGTGTGCCGCTGGGCTCTGAAGAAAGGCTGATTAG  
 AAAATTTGAAGCTGAAAACATCTCCAACACACGCGCCCTTCTGCTGAGCCAGGATGGCAAGACGCTGTAT  
 GTGGGGGCCCGAGAGGCCCTCTTTGCACTTAACAGCAACCTCAGCTTCTTGCCAGGCGGGGAGTACCAAG  
 AGCTGCTGTGGAGTGCAGATGCTGACAGGAAGCAGCAGTGCAGCTTCAAGGGCAAGGACCCAAAGCGTGA  
 CTGTCAAAACTACATCAAGATCCTCCTGCCACTCAACAGCAGCCACCTGCTCACCTGTGGCACGGCCGCC  
 TTCAGCCCCCTGTGTCTTACATTACATAGCGAGCTTTACTTTAGCCCAAGATGAGGCCGGCAATGTCA  
 TTCTGGAGGATGGCAAGGGTCGTTGTCCCTTTGACCCCAACTTCAAGTCCACGGCTCTGGTGGTTGATGG  
 TGAGCTGTACACTGGAACAGTCAGTAGCTTCCAGGGAAACGACCCAGCCATTTCCCGGAGCCAGAGTTCC  
 CGCCCCACCAAGACTGAGAGCTCCCTCAACTGGCTACAAGACCCTGCCTTTGTGGCTCGGCCTAGTCC  
 CCGAGAGCCTGGGCGAGCCCATAGGTGATGATGATAAGATCTACTTCTTCTCAGCGAGACGGGCCAGGA  
 GTTTGAGTTCTTTGAGAACACCATCGTGTCCCGAGTTGCCGAGTCTGTAAGGGCGATGAGGGTGGAGAG  
 CGGGTGTTCAGCAACGCTGGACCTCCTTTCTCAAGGCTCAGCTCCTGTGCTCCCGCCTGATGATGGCT  
 TTCCCTTTAACGTGCTACAAGATGTCTTACCCTGAACCCCAACCCTCAGGATTGGCGCAAGACCCTTTT  
 CTATGGGGTCTTTACCTCCAGTGGCACAGAGGGACCACAGAAGGCTCTGCCATCTGCGTCTTACCATG  
 AATGATGTGCAGAAGGCCTTTGACGGCCTGTACAAGAAAGTAAACAGAGAGACACAGCAGTGGTATACCC  
 AGACCCACCAAGTCCACACCCGCGGGGAGCGTGCATTACCAACAGTGCCTGGGCAAGCAAGATCAA  
 CTGCTCCCTGCAGCTCCAGACCGAGTGTGAACCTTCTCAAGGATCACTTCTTGATGGATGGGCGAGGTC  
 CGCAGTCGCTGTGCTGCTGCAGCCAGACCCGCTACCAGCGTGTGGCTGTGCACCGTGTGCCTGGCC  
 TGCACAGCACTTATGATGCTCTATTTCTGGGCACTGGTGTGGCCGCTGCACAAAGCAGTGACCCTGAG  
 CTCCAGAGTCCACATCATTGAGGAGCTGCAGATCTTCCCTCAAGGACAGCCTGTGCAGAACCTGCTCTTG  
 GACAGCCATGGGGACTGTTGTATGCCTCCTCCATTCCGGGGTGGTGAAGTGCCTGAGCCAAGTCA  
 GCCTGTACCCAACTGTGGAGACTGCCTCCTGGCTCGAGACCCCTACTGCGCCTGGACTGGCTCTGCCTG  
 CAGGCTCGCTAGCCTCTACCAGCCTGATCTGGCCTCCAGGCCATGGACCCAGGACATTGAGGGTGCAGT  
 GTCAAGGAACCTGCAAGAATTCCTCATACAAGGCCCGGTTTCTTGTGCCAGGTAAGCCATGTAACAAG  
 TCCAGATCCAACCAACACAGTGAACACCTGGCCTGCCACTCCTCTCAAACCTGGCCACTCGGCTCTG  
 GGTGCACAATGGAGCCCCAGTCAATGCCTCTGCCTCCTGCCGCGTGTACCCACCGGGGACCTGCTGCTG  
 GTGGGCGAGCCAGCAGGGTGTGGGGTGTCCAGTGTGGTTCGATAGAAGAAGGATTCCAGCAGCTTGTGG  
 CCAGCTACTGCCAGAGGTGATGGAGGAGGGGGTAAATGGACAAAAGAACCAGCGTGTGGTACCCAGT  
 CATTATCAACACATCACGAGTGAAGTGCACCGGCTGGTGGCAGGGCCAGCTGGGGTGCAGCAAGTCTAC  
 TGGAAATGAATTCCTGGTGTGTACTCTGTTTGTGTTGCTATGGTGTCTTTGTTTCTGTTCTTTCTCT  
 ACCGACATCGGGATGGCATGAACTCTTCTAAAGCAGGGCGAATGTGCCAGTGTGCACCCCAAGACTCG  
 CCCTATAGTGCTACCACCTGAGACCCGACCGCTGAATGGTGTGCGCCCTCCTAGCACCCCAAGACTCG  
 CGAGGCTACCAGGCTCTGTCGGATAGCTCCCAGGGCCAGAGTCTTCACTGAATCAGAGAAGAGGCCAC  
 TGAGCATCCAGGACAGCTTTGTAGAGGTGTCTCCCGTGTGTCGGCCCGGAGTTCGACTGGGCTCTGA  
 GATCCGAGACTCTGTGGTA

**ACCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG217141 representing NM\_013659  
 Red=Cloning site Green=Tags(s)

```
MGRASRSAVLRRALLLLLLLLLLLRTTTTRALGPRI SVPLGSEERLIRKFEAENISNYTALLLSQDGKTLY
VGAREALFALNSNLSFLPGGEYQELLWSADADRKQCSFKGKDPKRDCQNYIKILLPLNSSHLLTCGTAA
FSPLCAYIHIA SFTLAQDEAGNVILEDGKGRCPFDPNFKSTALVVDGELYTGTVSSFQGNPAISRSQSS
RPTKTESSLNWLQDPAFVASAYVPESLGSPIGDDDKIYFFFSETGQEFEFFENTIVSRVARVCKGDEGGE
RVLQQRWTSFLKAQLLCSRPDGFPFNVLQDVFTLNPNPQDWRKTLFYGVFTSQWHRGTTEGSAICVFTM
NDVQKAFDGLYKKVNRETQQWYTETHQVPTPRPGACITNSARERKINSSLQLPDRVLNFKDHFMDGQV
RSRLLLLQPRARYQRVAVHRVPLHSTYDVLFLGTGDGRLHKAVTLSSRVHIEELQIFPQGQPVQNL
DSHGGLLYASSHSGVVQVPVANC SLYPTCGDCLLARDPYCAWTGSACRLASLYQPDLASRPWTQDIEGAS
VKELCKNSSYKARFLVPGKPKQVQIQPNTVNTLACPLL SNLATRLWVHNGAPVNASASCRVLPDGLL
VGSQQGLGVFQCWSIEEGFQQLVASYCPEVMEEGVMDQKNQRDGPVIINTSRVSAPAGGRASWGADKSY
WNEFLVMCTLFVVFAMVLLFLFFLYRHRDGMKFLKQGECA SVHPKTRPIVLPPE TRPLNGVGPSTPLDH
RGYQALSDSSPGPRVFTSEKRPLSIQDSFVEVSPVCP RPRVRLGSEIRDSVV
```

TRTRPLE - GFP Tag - V

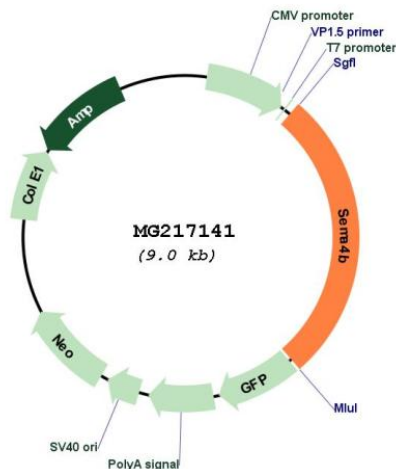
**Restriction Sites:** Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



EcoRI BamHI KpnI RBS Kozac Consensus SgfI AscI  
 CTATAGGGCGGCCGGGAATTCGTGACTGGATCCGGTACCGAGSAGATCTGCCGCCGATCGCCGGCGCCAGATCT  
  
 HindIII NheI RsrII MluI NotI XhoI GFP Tag  
 CAAGCTTAAGCTAGCTAGCGGACCG ACG CGT ACG CGG CCG CTC GAG ATG GAG AGC GAC --- --- ---  
 T R T R P L E M E S D - - -  
  
 PmeI FseI  
 --- --- GAA GAA AGA GTT TAA ACGGCCGGCCGCGGAGCT  
 - - - E E R V Stop

**Plasmid Map:**


**ACCN:** NM\_013659

**ORF Size:** 2469 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\\_013659.5](#)

**RefSeq Size:** 3946 bp

**RefSeq ORF:** 2472 bp

**Locus ID:** 20352

**UniProt ID:** [Q62179](#)

**Cytogenetics:** 7 D2

**Gene Summary:** Inhibits axonal extension by providing local signals to specify territories inaccessible for growing axons.[UniProtKB/Swiss-Prot Function]