

Product datasheet for **RG228931**

Semaphorin 7a (SEMA7A) (NM_001146030) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 7a (SEMA7A) (NM_001146030) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SEMA7A
Synonyms:	CD108; CDw108; H-SEMA-K1; H-Sema-L; JMH; SEMAK1; SEMAL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG228931 representing NM_001146030
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACGCCTCCTCCGCCGGACGTGCCGCCCCAGCGCACCGCGCCCGCTCCCTGGCCCGCGGCTC
GGTTGGGGCTTCCGCTGCGGCTGCGGCTGCTGCTGCTGCTGCTGGGCGGCCGCCCTCCGCCAGGGCCA
CCTAAGGAGCGGACCCCGCATCTTCGCCGTCTGGAAAGGCCATGTAGGGCAGGACCGGTGGACTTTGGC
CAGACTGAGCCGCACACGGTGCTTTCCACGAGCCAGGCAGTCTCTGTGTGGGTGGGAGGACGTGGCA
AGGTCTACCTCTTTGACTTCCCCGAGGGCAAGAACGCATCTGTGCGCACGGTGAATATCGGCTCCACAAA
GGGTCTGTCTGGATAAGCGGGACTGCGAGAATACTACTCTCTGGAGAGGCGGAGTGAGGGGCTG
CTGGCCTGTGGCACCACGCCCGCACCCAGCTGCTGGAACCTGGTGAATGGCACTGTGGTGCCACTTG
GCGAGATGAGAGGCTACGCCCCCTCAGCCCGGACGAGAATACTCCCTGGTCTGTTTGAAGGGGACGAGGT
GTATCCACCATCCGGAAGCAGGAATAAATGGGAAGATCCCTCGGTTCCGCCGATCCGGGGCAGAGT
GAGCTGTACACCAGTGATCTGTATGCAGAACCACAGTTCATCAAAGCCACCATCGTGACCAAGACC
AGGCTTACGATGACAAGATCTACTACTTCTTCCGAGAGGACAATCCTGACAAGAATCCTGAGGCTCCTCT
CAATGTGTCCCCTGTGGCCAGTTGTGCAGGGGGACAGGGTGGGAAAGTTCACTGTCACTCTCCAAG
TGGAACACTTTTCTGAAAGCCATGCTGGTATGCAGTGTGCTGCCACCAACAAGAACTTCAACAGGCTGC
AAGACGTCTTCTGCTCCCTGACCCAGCGGCCAGTGGAGGGACACCAGGGTCTATGGTGTCTTCTCAA
CCCCTGGAATACTCAGCCGTCTGTGTGATTCCTCGGTGACATTGACAAGGTCTTCCGTACCTCCTCA
CTCAAGGGCTACCACTCAAGCCTCCCAACCCCGGCCCTGGCAAGTGCTCCAGACCAGCAGCCGATAC
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CATGTCGCTGGATGCTGAGCGGAGGAAGCTGTATGTGAGCTCCAGTGGGAGGTGAGCCAGGTGCCCTG
GACCTGTGTGAGGTCTATGGCGGGGCTGCCACGGTTCCTCATGTCCCGAGACCCTACTGCGGCTGG
ACCAAGGCCGCTGCATCTCCATCTACAGCTCCGAACGGTCAGTGTGCAATCCATTAATCCAGCCGAGCC
ACACAAGGAGTGTCCCAACCCCAACCAGACAAGGCCCACTGCAGAAGGTTTCCCTGGCCCCAACTCT
CGTACTACCTGAGCTGCCCCATGGAATCCCGCCACGCCACTACTCATGGCGCCACAAGGAGAAGTGG
AGCAGAGCTGCGAACCTGGTACCAGAGCCCCAAGTGCATCCTGTTCATCGAGAACCTCACGGCGCAGCA
GTACGGCCACTACTTCTGCGAGGCCAGGAGGGCTCTACTTCCGCGAGGCTCAGCACTGGCAGTGTCTG
CCCAGGACGGCATCATGGCCGAGCACCTGCTGGGTATGCCTGTGCCCTGGCCGCTCCCTCTGGCTGG
GGGTGCTGCCCACTACTCTTGGCTTGTGTTCCAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG228931 representing NM_001146030
 Red=Cloning site Green=Tags(s)

MTPPPPGRAAPSAPRARVPGPPARLGLPLRLRLLLLLWAAAASAQGHLSGPRIFAVWKGHVQDRVDFG
 QTEPHTVLFHEPGSSSVWVGGGRKVYLFDFPEGKNASVRTVNIIGSTKGSCLDKRDCENYITLLERRSEGL
 LACGTNARHPSCWNLVNGTVVPLGEMRGYAPFSPDENS L VLFEGDEVYSTIRKQEYNGKIPRFRIRGES
 ELYTSDTVMQNPQFIKATIVHQDQAYDDKIYYFFREDNPDKNPEAPLNVS RVAQLCRGDQGGESSLSVSK
 WNTFLKAMLVCSDAATNKNFNRLQDVFLLPDPSGQWRDTRVYGVF SNPWNYSAVCVYSLGDIDKVFRTSS
 LKGYHSSLPNPRPGKCLPDQQPIPTETTFQADRHP EVAQRVEPMGPLK TPLFHSKYHYQKVAVHRMQASH
 GETFHVLYLTTDRGTIHKVVEPGEQEHSFAFNIMEIQPFRAAAIQTMSLDAERRKLYVSSQWEVSQVPL
 DLCEVYGGGCHGCLMSRDPYCGWDQGRCSISYSSERSVLQSNPAEPHKECPNPKPKAPLQKVSLAPNS
 RYYLSCPME SRHATYSWRHKENVEQSCEPHQSPNCILFIENLTAQQYGHYFCEAQEGSYFREAQHWQLL
 PEDGIMAEHLLGHACAL AASLWLGVLPTLTLGLLVH

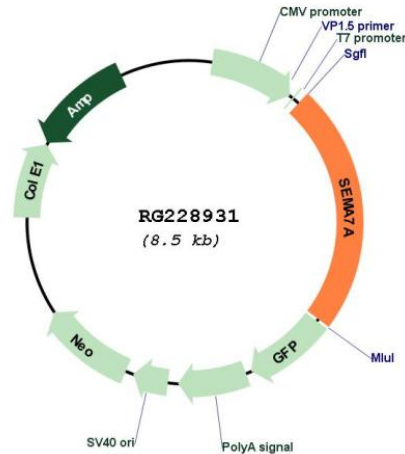
TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_001146030

ORF Size: 2001 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_001146030.1](#), [NP_001139502.1](#)

RefSeq Size: 3246 bp

RefSeq ORF: 1506 bp

Locus ID: 8482

UniProt ID: [O75326](#)

Cytogenetics: 15q24.1

Protein Pathways: Axon guidance

Gene Summary: This gene encodes a member of the semaphorin family of proteins. The encoded preproprotein is proteolytically processed to generate the mature glycosylphosphatidylinositol (GPI)-anchored membrane glycoprotein. The encoded protein is found on activated lymphocytes and erythrocytes and may be involved in immunomodulatory and neuronal processes. The encoded protein carries the John Milton Hagen (JMH) blood group antigens. Mutations in this gene may be associated with reduced bone mineral density (BMD). Alternative splicing results in multiple transcript variants, at least one of which encodes an isoform that is proteolytically processed. [provided by RefSeq, Feb 2016]