

Product datasheet for **RG210966**

Semaphorin 7a (SEMA7A) (NM_003612) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Semaphorin 7a (SEMA7A) (NM_003612) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Semaphorin 7a
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)



[View online »](#)

ORF Nucleotide Sequence:

>RG210966 representing NM_003612
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGCCTCTCCGCCCGACGTGCCGCCCCAGCGCACCGCGCGCCCGCTCCCTGGCCCGCGGCTC
 GGTTGGGGCTTCCGCTGCGGCTGCGGCTGCTGCTGCTGCTGCTGGGCGGCCGCCCTCCGCCAGGGCCA
 CCTAAGGAGCGGACCCCGCATCTTCGCCGTCTGGAAAGGCCATGTAGGGCAGGACCGGTGGACTTTGGC
 CAGACTGAGCCGCACACGGTGCTTTCCACGAGCCAGGCAGTCTCTGTGTGGGTGGGAGGACGTGGCA
 AGGTCTACCTCTTTGACTTCCCCGAGGGCAAGAACGCATCTGTGCGCACGGTGAATATCGGCTCCACAAA
 GGGGTCTGTCTGGATAAGCGGGACTGCGAGAATACTACTCTCTGGAGAGGCGGAGTGAGGGGCTG
 CTGGCCTGTGGCACCACGCCCGCACCCAGCTGCTGGAACCTGGTGAATGGCACTGTGGTGCCACTTG
 GCGAGATGAGAGGCTACGCCCCCTCAGCCCGGACGAGAATCCCTGGTTCTGTTTGAAGGGGACGAGGT
 GTATTCCACCATCCGGAAGCAGGAATAAATGGGAAGATCCCTCGTTCCGCCGATCCGGGGCGAGAGT
 GAGCTGTACACCAGTGATCTGTATGCAGAACCACAGTTCATCAAAGCCACCATCGTGACCAAGACC
 AGGCTTACGATGACAAGATCTACTACTTCTTCCGAGAGGACAATCCTGACAAGAATCCTGAGGCTCTCT
 CAATGTGTCCCCTGTGGCCAGTTGTGCAGGGGGACAGGGTGGGGAAAGTTCACTGTCACTCTCCAAG
 TGGAACTTTTCTGAAAGCCATGCTGGTATGCAGTGTGCTGCCACCAACAAGAACTTCAACAGGCTGC
 AAGACGTCTTCTGCTCCCTGACCCAGCGGCCAGTGGAGGGACACCAGGGTCTATGGTGTCTTCTCAA
 CCCCTGGAATACTCAGCCGTCTGTGTGATTCCTCGGTGACATTGACAAGGTCTTCCGTACCTCTCA
 CTCAAGGGCTACCACTCAAGCCTTCCCAACCCGCGCCCTGGCAAGTGCCTCCAGACCAGCAGCCGATAC
 CCACAGAGACCTCCAGGTGGCTGACCGTCACCCAGAGGTGGCGCAGAGGGTGGAGCCCATGGGGCCTCT
 GAAGACGCCATTGTTCCACTCTAAATACCACTACCAGAAAAGTGGCCGTCCACCGCATGCAAGCCAGCCAC
 GGGGAGACCTTTCATGTGCTTTACCTAACTACAGACAGGGGCACTATCCACAAGGTGGTGAACCGGGG
 AGCAGGAGCACAGCTTCGCCTTCAACATCATGGAGATCCAGCCCTTCCGCCGCGCGGCTGCCATCCAGAC
 CATGTCGCTGGATGCTGAGCGGAGGAAGCTGTATGTGAGCTCCAGTGGGAGGTGAGCCAGGTGCCCTG
 GACCTGTGTGAGGTCTATGGCGGGGCTGCCACGGTTCCTCATGTCCCGAGACCCTACTGCGGCTGGG
 ACCAAGGCCGCTGCATCTCCATCTACAGCTCCGAACGGTCACTGCTGCAATCCATTAATCCAGCCGAGCC
 ACACAAGGAGTGTCCCAACCCCAACCAGACAAGGCCCACTGCAGAAGGTTTCCCTGGCCCAAACTCT
 CGCTACTACCTGAGCTGCCCCATGGAATCCCGCCACGCCACTACTCATGGCGCCACAAGGAGAAGTGG
 AGCAGAGCTGCGAACCTGGTACCAGAGCCCAACTGCATCCTGTTCATCGAGAACCTCACGGCGCAGCA
 GTACGGCCACTACTTCTGCGAGGCCAGGAGGGCTCTACTTCCGCGAGGCTCAGCACTGGCAGCTGCTG
 CCCGAGGACGGCATCATGGCCGAGCACCTGCTGGGTATGCCTGTGCCCTGGCCGCTCCCTCTGGCTGG
 GGTGCTGCCCACTACTCTTGGCTTGTGTTCCAC

ACGCGTACGCGGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG210966 representing NM_003612
Red=Cloning site Green=Tags(s)

MTPPPPGRAAPSAPRARVPGPPARLGLPLRLRLLLLLWAAAASAQGHLSGPRIFAVWKGHVQDRVDFG
 QTEPHTVLFHEPGSSSVWVGGGRKVYLFDFPEGKNASVRTVNIIGSTKGSCLDKRDCENYITLLERRSEGL
 LACGTNARHPSCWNLVNGTVVPLGEMRGYAPFSPDENSLLVLFEGDEVYSTIRKQEYNGKIPRFRIRGES
 ELYTSDTVMQNPQFIKATIVHQDQAYDDKIYYFFREDNPDKNPEAPLNVSRAVQLCRGDQGGESSLSVSK
 WNTFLKAMLVCSDAATNKNFNRLQDVFLLPDPSGQWRDTRVYGVFVSNPWNYSAVCVYSLGDIKVFRTSS
 LKGYHSSLPNPRPGKCLPDQQPIPTETTFQADRHPVAQVPEPMGPLKTPLFHSHYHYQKIVAVHRMQASH
 GETFHVLYLTTDRGTIHKVVEPGEQEHSFAFNIMEIQPFRAAAIQTMSLDAERRKLYVSSQWEVSQVPL
 DLCEVYGGGCHGCLMSRDPYCGWDQGRCSISYSSERSVLQSNPAEPHKECPNPKPKAPLQKVSLAPNS
 RYYLSCPMSRHATYSWRHKENVEQSCEPHQSPNCILFIENLTAQQYGHYFCEAQEGSYFREAQHWQLL
 PEDGIMAEHLLGHACALASLWLVPLTLGLLVH

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003612

ORF Size: 1998 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_003612.5](#)

RefSeq Size: 2661 bp

RefSeq ORF: 2001 bp

Locus ID: 8482

UniProt ID: [O75326](#)

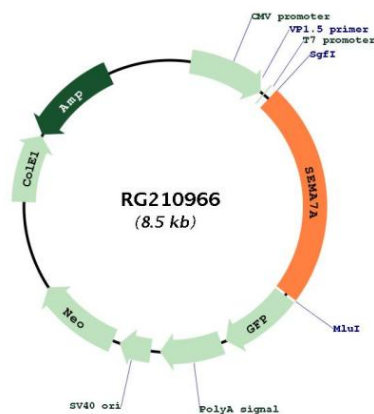
Cytogenetics: 15q24.1

Domains: Sema, PSI

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 (JM) 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]

Product images:



Circular map for RG210966