

Product datasheet for **RC228931**

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:	Myc-DDK
Symbol:	Semaphorin 7a
Synonyms:	CD108; CDw108; H-SEMA-K1; H-Sema-L; JMH; SEMAK1; SEMAL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC228931 representing NM_001146030
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACGCCTCTCCGCCCGACGTGCCGCCCCAGCGCACCGCGCCCGCTCCCTGGCCCGCGGCTC
 GGTTGGGGCTTCCGCTGCGGCTGCGGCTGCTGCTGCTGCTGCTGGGCGGCCGCCCTCCGCCAGGGCCA
 CCTAAGGAGCGGACCCCGCATCTTCGCCGTCTGGAAAGGCCATGTAGGGCAGGACCGGTGGACTTTGGC
 CAGACTGAGCCGCACACGGTGCTTTCCACGAGCCAGGCAGTCTCTGTGTGGTGGGAGGACGTGGCA
 AGGTCTACCTCTTTGACTTCCCCGAGGGCAAGAACGCATCTGTGCGCACGGTGAATATCGGCTCCACAAA
 GGGGTCTGTCTGGATAAGCGGGACTGCGAGAATACTACTCTCTGGAGAGGCGGAGTGAGGGGCTG
 CTGGCCTGTGGCACCACGCCCGCACCCAGCTGCTGGAACCTGGTGAATGGCACTGTGGTGCCACTTG
 GCGAGATGAGAGGCTACGCCCTTCAGCCCGGACGAGAATACTCTGGTTCTGTTTGAAGGGGACGAGGT
 GTATTCCACCATCCGGAAGCAGGAATAAATGGGAAGATCCCTCGTTCCGCCGATCCGGGGCGAGAGT
 GAGCTGTACACCAGTGATCTGTATGCAGAACCACAGTTCATCAAAGCCACCATCGTGACCAAGACC
 AGGCTTACGATGACAAGATCTACTACTTCTTCCGAGAGGACAATCCTGACAAGAATCCTGAGGCTCTCT
 CAATGTGTCCCCTGTGGCCAGTTGTGCAGGGGGACAGGGTGGGGAAAGTTCACTGTCACTCTCCAAG
 TGGAACTTTTCTGAAAGCCATGCTGGTATGCAGTGTGCTGCCACCAACAAGAACTTCAACAGGCTGC
 AAGACGTCTTCTGCTCCCTGACCCAGCGGCCAGTGGAGGGACACCAGGGTCTATGGTGTCTTCTCAA
 CCCCTGGAATACTCAGCCGTCTGTGTGATTCCTCGGTGACATTGACAAGGTCTTCCGTACCTCTCA
 CTC AAGGGCTACCACTCAAGCCTTCCCAACCCGCGCCCTGGCAAGTGCCTCCAGACCAGCAGCCGATAC
 CCACAGAGACCTCCAGGTGGCTGACCGTCACCCAGAGGTGGCGCAGAGGGTGGAGCCCATGGGGCCTCT
 GAAGACGCCATTGTTCCACTCTAAATACCACTACCAGAAAAGTGGCCGTCCACCGCATGCAAGCCAGCCAC
 GGGGAGACCTTTCATGTGCTTTACCTAACTACAGACAGGGGCACTATCCACAAGGTGGTGAACCGGGG
 AGCAGGAGCACAGCTTCGCCTTCAACATCATGGAGATCCAGCCCTTCCGCCGCGCGGCTGCCATCCAGAC
 CATGTCGCTGGATGCTGAGCGGAGGAAGCTGTATGTGAGCTCCAGTGGGAGGTGAGCCAGGTGCCCTG
 GACCTGTGTGAGGTCTATGGCGGGGCTGCCACGGTTCCTCATGTCCCGAGACCCTACTGCGGTGG
 ACCAAGGCCGCTGCATCTCCATCTACAGCTCCGAACGGTCACTGCTGCAATCCATTAATCCAGCCGAGCC
 ACACAAGGAGTGTCCCAACCCCAACCAGACAAGGCCCACTGCAGAAGGTTTCCCTGGCCCAAACTCT
 CGCTACTACCTGAGCTGCCCCATGGAATCCCGCCACGCCACTACTCATGGCGCCACAAGGAGAAGTGG
 AGCAGAGCTGCGAACCTGGTACCAGAGCCCAACTGCATCCTGTTCATCGAGAACCTCACGGCGCAGCA
 GTACGGCCACTACTTCTGCGAGGCCAGGAGGGCTCTACTTCCGCGAGGCTCAGCACTGGCAGCTGCTG
 CCCGAGGACGGCATCATGGCCGAGCACCTGCTGGGTATGCCTGTGCCCTGGCCGCTCCCTCTGGCTGG
 GGGTGTGCCACACTACTCTTGGCTTGTGTTCCAC

ACGCGTACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC228931 representing NM_001146030
 Red=Cloning site Green=Tags(s)

MTPPPPGRAAPSAPRARVPGPPARLGLPLRLRLLLLLWAAAASAQGHLSGPRIFAVWKGHVQDRVDFG
 QTEPHTVLFHEPGSSSVWVGGGRKVYLFDFPEGKNASVRTVNIIGSTKGSCLDKRDCENYITLLERRSEGL
 LACGTNARHPSCWNLVNGTVVPLGEMRGYAPFSPDENSLVLFEGDEVYSTIRKQEYNGKIPRFRIRGES
 ELYTSDTVMQNPQFIKATIVHQDQAYDDKIYYFFREDNPDKNPEAPLNVSRAQLCRGDQGGESSLSVSK
 WNTFLKAMLVCSDAATNKNFNRLQDVFLLPDPSGQWRDTRVYGVFSPWNYSAVCVYSLGDIDKVFRTSS
 LKGYHSSLPNPRPGKCLPDQQPIPTETFQVADRHPEVAQRVEPMGPKTPLFHSKYHYQKVAVHRMQASH
 GETFHVLYLTTDRGTIHKVVEPEGEHSEAFNIMEIQPFRAAAIQTMSLDAERRKLYVSSQWEVSQVPL
 DLCEVYGGGCHGCLMSRDPYCGWDQGRCSISYSSERSVLQSNPAEPHKECPNPKPKAPLQKVSLAPNS
 RYYLSCPMEHRATYSWRHKNVEQSCEPHQSPNCILFIENLTAQQYGHYFCEAQEGSYFREAQHWQLL
 PEDGIMAEHLLGHACALASLWLVPLTLGLLVH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

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](#), [NM_001146030.2](#), [NP_001139502.1](#)

RefSeq Size: 3246 bp

RefSeq ORF: 1506 bp

Locus ID: 8482

UniProt ID: [O75326](#)

Cytogenetics: 15q24.1

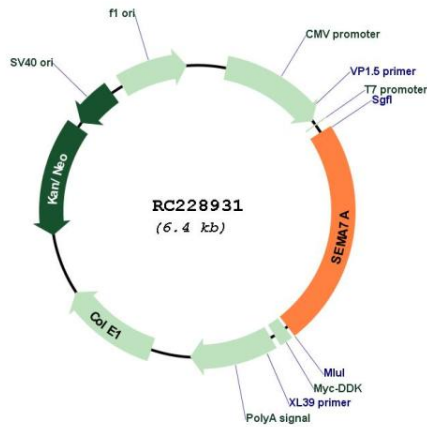
Protein Pathways: Axon guidance

MW: 74.8 kDa

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]

Product images:



Circular map for RC228931