

Product datasheet for **SC109205**

Factor VII (F7) (NM_019616) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Factor VII (F7) (NM_019616) Human Untagged Clone
Tag:	Tag Free
Symbol:	Factor VII
Synonyms:	SPCA
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC109205 sequence for NM_019616 edited (data generated by NextGen Sequencing)

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ATGGTCTCCCAGGCCCTCAGGCTCCTCTGCCTTCTGCTTGGGCTTCAGGGCTGCCTGGCT
GCAGTCTTCGTAACCCAGGAGGAAGCCACGGCGTCTGCACCGGCGCCGGCGCGCAAC
GCGTTCCTGGAGGAGCTACGGCCGGGCTCCCTGGAGAGGAGTGAAGGAGGAGCAGTGC
TCCTTCGAGGAGGCCCGGAGATCTTCAAGGACCGGAGAGGACGAAGCTGTTCTGGATT
TCTTACAGTGATGGGACCAGTGTGCCTCAAGTCCATGCCAGAATGGGGGCTCCTGCAAG
GACCAGTCCAGTCTATATCTGCTTCTGCCTCCCTGCCTTCGAGGGCCGGAAGTGTGAG
ACGCACAAGGATGACCAGCTGATCTGTGTGAACGAGAACGGCGGTGTGAGCAGTACTGC
AGTGACCACACGGGACCAAGCGCTCCTGTCGGTGCCACGAGGGTACTCTCTGTGGCA
GACGGGTGTCTGCACACCCACAGTTGAATATCCATGTGAAAAATACCTATTCTAGAA
AAAAGAAATGCCAGAAACCCCAAGGCCGAATTGTGGGGGCAAGGTGTGCCCCAAGGG
GAGTGTCCATGGCAGGCTCTGTTGTTGGTGAATGGAGCTCAGTTGTGGGGGACCTG
ATCAACACCATCTGGGTGCTCCGCGGCCACTGTTTCGACAAAATCAAGAACTGGAGG
AACCTGATCGCGGTGCTGGGCGAGCAGCCTCAGCGAGCAGCAGGGGATGAGCAGAGC
CGGCGGGTGGCGCAGGTATCATCCCCAGCACGTACGTCCCGGGACCACCAACCACGAC
ATCGCGCTGCTCCGCTGCACCAGCCCGTGGTCTCACTGACCATGTGGTGCCCTCTGC
CTGCCCGAACGGACGTTCTCTGAGAGGACGCTGGCCTTCGTGCGCTTCTCATTGGTCAGC
GGCTGGGGCCAGCTGCTGGACCGTGGCGCCACGGCCCTGGAGCTCATGGTCTCAACGTG
CCCCGGCTGATGACCCAGGACTGCCTGCAGCAGTACGGAAGGTGGGAGACTCCCCAAAT
ATCAGGGAGTACATGTTCTGTGCCGGTACTCGGATGGCAGCAAGGACTCCTGCAAGGGG
GACAGTGGAGGCCACATGCCACCCACTACCGGGGACGTGGTACCTGACGGGCATCGTC
AGCTGGGGCCAGGGCTGCGCAACCGTGGGCCACTTTGGGGTGTACACCAGGGTCTCCAG
TACATCGAGTGGCTGCAAAAGCTCATGCGCTCAGAGCCACGCCACGGAGTCTCTGCGA
GCCCCATTTCCCTAG
    
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Clone variation with respect to NM_019616.2
138 g=>a

5' Read Nucleotide Sequence: >OriGene 5' read for NM_019616 unedited

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GGGCATTATTCGATACGACTCATATAGCGGCCGTCGAATTCGCACGAGGGCAGGGCA
GCACTGCAGAGATTTTCATCATGGTCTCCAGGCCCTCAGGCTCCTCTGCCTTCTGCTTGG
GCTTCAGGGCTGCCTGGCTGCAGTCTTCGTAACCCAGGAGGAAGCCACGGCGTCTGCA
CCGGCGCCGGCGCCCAACCGCTTCTGGAGGAGCTACGGCCGGGCTCCCTGGAGAGGGA
GTGCAAGGAGGAGCAGTGTCTCTCGAGGAGGCCCGGAGATCTTCAAGGACCGGAGAG
GACGAAGCTGTTCTGGATTTCTTACAGTGATGGGACCAGTGTGCCTCAAGTCCATGCCA
GAATGGGGGCTCCTGCAAGGACCAGTCCAGTCTATATCTGCTTCTGCCTCCCTGCCTT
CGAGGGCCGGAAGTGTGAGACGCACAAGGATGACCAGTGTCTGTGTGAACGAGAACGG
CGGCTGTGAGCAGTACTGCAAGTACCACACGGGACCAAGCGCTCCTGTGCGTGCCACGA
GGGGTACTCTCTGCTGGCAGACGGNGTGTCTGCACACCCACAGTTGAATATCCATGTGG
AAAAATACCTATTCTAGAAAAAAGAAATGCCAGNCAACCCCAAGGCCGAATTGTGGGGG
CAAGGTGTGCCCCANAGGGGAGTGTCCATGGCANGTCTGTTGTTGGTGAATGGAGTCA
TTTGTGTGGGGGGACCCTGATCAACACCATCTGGGTGCTCCGCGGCCACTGGTTT
CGACAAAATCAAGAACTTGGAGAACCTGATCGCCGTGCTGGGCGAGCAGCCTCAGCGA
GCACGACGGGATGACCAAGCCCGGGTGGCGCCAGTAATTATCCCCACAGTACGTC
CCGGGCACCAACCATAN
    
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_019616 unedited NGCCCCTACTTGAACCCGGCCGCTTTTTAGATCGAGTTTTTTTTTTTTTTTTTTTTTTTGG CAGGCTCCACAGGTGTGCGGAGGAGACGCAGCCGTTTATTGTGAAGCTGGGAAGCAGGTG GGAATATCTGTGCACCCGCCCCACGAAGGAGAAATACATTTGGGGGAGAGTTTGGGGGC ATTCGCCACCATGCATGGGGATGCTTCTGAATTGTCTGAAGTGAAGATGATAATGGATAA GAACCGAAAAAGTGAGAGCTAAACAACCCGCTTCAGAGGACAGCACACATGGAGTCAGCA TCGGTGTGTGCATCTGTGTGTGCATCTGTGTGTGTACATCGGTGTGTGTGCGCATTGG TGTGTGTGTGCTCATCCATGTGTGTGCATATCTGTGTGTGCGCACATCGGTGTGTGCATA TCTCTGTGCATCCGTGTGCACTGATGTGTGCGTGCATTGGCATGTGCGTGCATCCATGTG TATATCTGTGTGCATCTGTGTGTGCATATCTCTATGTGCGTGTGCATCGGTGTGTTTG CGTATCTCTGTGTGACCATCTGTGTGTGCATCCGTGTGTGTGCATATCTCTGTGTGTG CATTGGCGTGTGTGTGTGCATCCATGTGTGTTATGCCTCTACTGGCTCCAGCAATGA AGGCAGAGCATCAGCCTTGAGTCCACCACATCACTGCCAGTTGCCTTGTCTGAAAGGAG GTAAAAGAAGCCTCACCTGGGCTTGTCTGCCTCCAGAACAACCTTGGGCACCTCCCCTGC CCCCTTTGTACAACGGCCTGTTGCCTTTGCCTTTCAATTTTTTTATACCCTCCCCTGGGG CCCTTTATACCCTTTGAATCTTGAAGCTTTTTGGAGTCCCTCCCCTGGTCCCAAAAT TTCTCCCTTAAGTTTTCTTTGTTTT
Restriction Sites:	NotI-NotI
ACCN:	NM_019616
Insert Size:	2500 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none"> 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_019616.1 , NP_062562.1
RefSeq Size:	2412 bp
RefSeq ORF:	1335 bp
Locus ID:	2155
UniProt ID:	P08709
Cytogenetics:	13q34
Domains:	GLA, Tryp_SpC, EGF_CA, EGF, EGF
Protein Families:	Druggable Genome, Protease

Protein Pathways: Complement and coagulation cascades

Gene Summary: This gene encodes coagulation factor VII which is a vitamin K-dependent factor essential for hemostasis. This factor circulates in the blood in a zymogen form, and is converted to an active form by either factor IXa, factor Xa, factor XIIa, or thrombin by minor proteolysis. Upon activation of the factor VII, a heavy chain containing a catalytic domain and a light chain containing 2 EGF-like domains are generated, and two chains are held together by a disulfide bond. In the presence of factor III and calcium ions, the activated factor then further activates the coagulation cascade by converting factor IX to factor IXa and/or factor X to factor Xa. Defects in this gene can cause coagulopathy. Alternative splicing results in multiple transcript variants encoding different isoforms that may undergo similar proteolytic processing to generate mature polypeptides. [provided by RefSeq, Aug 2015]

Transcript Variant: This variant (2) lacks an exon in the 5' coding region, but maintains the reading frame, compared to variant 1. The encoded isoform (b) is shorter than isoform a. This isoform (b) may undergo proteolytic processing similar to isoform a. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments. A downstream translational start codon is selected for this RefSeq based on its better conservation in mammalian species. An upstream in-frame start codon is also present and would result in a protein that is 15 aa longer at the N-terminus, but this start codon is poorly conserved and located within a protein-binding site identified in the promoter region, as described in PubMed: 8576177. Leaky scanning by ribosomes may allow translation initiation at the downstream start codon.