

## Product datasheet for SC125542

### Factor VII (F7) (NM\_000131) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Factor VII (F7) (NM_000131) 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)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000131, the custom clone sequence may differ by one or more nucleotides

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ATGGTCTCCCAGGCCCTCAGGCTCCTCTGCCTTCTGCTTGGGCTTCAGGGCTGCCTGGCTGCAGGCGGGG
TCGCTAAGGCCTCAGGAGGAGAAACACGGGACATGCCGTGGAAGCCGGGGCCTCACAGAGTCTTCGTAAC
CCAGGAGGAAGCCACGGCGTCTGCACCGGCGCCGGCGCCAAACGCGTTCTGGAGGAGCTGCGGCCG
GGCTCCCTGGAGAGGGAGTGCAAGGAGGAGCAGTGTCTTCGAGGAGGCCCGGGAGATCTCAAGGACG
CGGAGAGGACGAAGCTGTTCTGGATTTCTACAGTGATGGGGACCAGTGTGCCTCAAGTCCATGCCAGAA
TGGGGCTCCTGCAAGGACCAGCTCCAGTCTATATCTGCTTCTGCCTCCCTGCCTTCGAGGGCCGGAAC
TGTGAGACGCACAAGGATGACCAGCTGATCTGTGTGAACGAGAACGGCGGCTGTGAGCAGTACTGCAGTG
ACCACACGGGCACCAAGCGCTCCTGTGGTGCACGAGGGGACTCTCTGCTGGCAGACGGGGTGTCTGTG
CACACCCACAGTTGAATATCCATGTGAAAAATACCTATTCTAGAAAAAGAAATGCCAGCAAACCCCAA
GGCCGAATTGTGGGGGGCAAGGTGTGCCCAAAGGGGAGTGTCCATGGCAGGTCCTGTTGTTGGTGAATG
GAGCTCAGTTGTGTGGGGGGACCCTGATCAACACCATCTGGTGGTCTCCGCGGCCCACTGTTTCGACAA
AATCAAGAACTGGAGGAACCTGATCGGGTGTGGGCGAGCAGCCTCAGCGAGCAGCAGCGGGATGAG
CAGAGCCGGCGGGTGGCGCAGGTGATCATCCCCAGCACGTACGTCCCGGGCACCACCAACCACGACATCG
CGCTGCTCCGCTGCACCAGCCCGTGGTCTCACTGACCATGTGGTGGCCCTCTGCCTGCCCGAACGGAC
GTTCTCTGAGAGGACGCTGGCCTTCGTGCGCTTCTCATTGGTCAGCGGCTGGGGCCAGCTGCTGGACCT
GGCGCCACGGCCCTGGAGCTCATGGTCCCAACGTGCCCGGCTGATGACCCAGGACTGCCTGCAGCAGT
CACGGAAGGTGGGAGACTCCCCAAATATCACGGAGTACATGTTCTGTGCCGGCTACTCGGATGGCAGCAA
GGACTCCTGCAAGGGGGACAGTGGAGGCCACATGCCACCCTACTCCGGGGCACGTGGTACTGACGGGC
ATCGTCAGCTGGGGCCAGGGCTGCGCAACCGTGGGCCACTTTGGGGTGTACACCAGGGTCTCCAGTACA
TCGAGTGGCTGCAAAAGCTCATGCGCTCAGAGCCACGCCAGGAGTCTCTGCGAGCCCCATTTCCCTA
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<b>5' Read Nucleotide Sequence:</b>	>OriGene 5' read for NM_000131 unedited TCGACTTTGAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGCAGGGGCAG CACTGCAGAGATTTATCATGGTCTCCCAGGCCCTCAGGCTCCTCTGCCTTCTGCTTGGG CTTCAGGGCTGCCTGGCTGCAGGCGGGGTCGCTAAGGCCCTCAGGAGGAGAAACACGGGAC ATGCCGTGGAAGCCGGGGCTCACAGAGTCTTCGTAACCCAGGAGGAAGCCACGGCGTC CTGCACCGGCGCCGGCGGCCAACGCCTTCTCGAGGAGCTACGGCCGGGCTCCCTGGAG AGGGAGTGCAAGGAGGAGCAGTGCTCCTTCGAGGAGGCCCGGGAGATCTTCAAGGACGCG GAGAGGACGAAGCTGTTCTGGATTCTTACAGTGATGGGGACCAGTGTGCCTCAAGTCCA TGCCAGAATGGGGCTCCTGCAAGGACCAGCTCCAGTCCTATATCTGCTTCTGCCTTCCC TGCTTCGAGGGCCGGAAGTGTGAGACGCACAAGGATGACCAGCTGATCTGTGTGAACGA GAACGGCGGCTGTGAGCAGTACTGCAGTGACCACACGGGCACCCAAGCGCTCTGGTCGTG CCACGAGGGTACTCTCTGCTGGCAGACGGGTGTCTGCACANCCACAGTTGAATATCC ATGTGGAAAATACTATTCTAGAAAAAAGATTGCNGGCAAACCCAGGCCGATTGGGGG GAAGGTTGCCAAGGGATGGCATGGAGTCCGTGTGGTGATGACTCATGGTGGGGACTGGT AACCTTGGTCTCGGCCATGTCACAATCAATGGGACGTTGGGTGCAAC
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_000131
<b>Insert Size:</b>	2600 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_000131.2</a> , <a href="#">NP_000122.1</a>
<b>RefSeq Size:</b>	3144 bp
<b>RefSeq ORF:</b>	3144 bp
<b>Locus ID:</b>	2155
<b>UniProt ID:</b>	<a href="#">P08709</a>
<b>Cytogenetics:</b>	13q34
<b>Domains:</b>	GLA, Tryp_SPc, EGF_CA, EGF, EGF
<b>Protein Families:</b>	Druggable Genome, Protease
<b>Protein Pathways:</b>	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 (1) represents the longest transcript and encodes the longest 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.