

Product datasheet for **SC120099**

Factor XIIIa (F13A1) (NM_000129) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Factor XIIIa (F13A1) (NM_000129) Human Untagged Clone
Tag:	Tag Free
Symbol:	Factor XIIIa
Synonyms:	F13A
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

Fully Sequenced ORF: >OriGene ORF within SC120099 sequence for NM_000129 edited (data generated by NextGen Sequencing)

```

ATGTCAGAAACTTCCAGGACCGCCTTTGGAGGCAGAAGAGCAGTTCCACCCAATAACTCT
AATGCAGCGGAAGATGACCTGCCACAGTGGAGCTTCAGGGCGTGGTGCCCCGGGGCGTC
AACCTGCAAGAGTTTCTTAATGTCACGAGCGTTCACCTGTTCAAGGAGAGATGGGACACT
AACAAAGTGGACCACCACACTGACAAGTATGAAAAACAACAAGCTGATTGTCCGCAGAGGG
CAGTCTTTCTATGTGCAGATTGACTTCAGTCGTCCATATGACCCCAAGGGATCTCTTC
AGGGTGGAAATACGTCATTGGTCGCTACCCACAGGAGAACAAGGGAACTACATCCCAGTG
CCTATAGTCTCAGAGTTACAAAGTGAAAAGTGGGGGGCCAAAGATTGTCATGAGAGAGGAC
AGGTCTGTGCGGCTGTCCATCCAGTCTTCCCCAAATGTATTGTGGGAAATTCCGCATG
TATGTTGCTGTCTGGACTCCCTATGGCGTACTTCGAACCAAGTCGAAACCCAGAAACAGAC
ACGTACATTCTTCAATCCTTGGTGTGAAGATGATGCTGTGTATCTGGACAATGAGAAA
GAAAGAGAAGAGTATGCCTGAATGACATCGGGTAATTTTTTATGGAGAGGTCAATGAC
ATCAAGACCAGAAGCTGGAGCTATGGTCAGTTTGAAGATGGCATCCTGGACACTTGCCCTG
TATGTGATGGACAGACAAAATGGACCTCTCTGGAAGAGGGAATCCCATCAAAGTCAGC
CGTGTGGGGTCTGCAATGGTGAATGCCAAAGATGACGAAGGTGTCTCGTTGGATCCTGG
GACAATATCTATGCCTATGGCGTCCCCCATCGGCCTGGACTGGAAGCGTTGACATTCTA
TTGGAATACCGGAGCTCTGAGAATCCAGTCCGGTATGGCCAATGCTGGGTTTTGCTGGT
GTCTTTAACACATTTTTACGATGCCTTGGAAATACCAGCAAGAATTGTTACCAATTATTTT
TCTGCCATGATAATGATGCCAATTTGCAAATGGACATCTTCTGGAAGAAGATGGGAAC
GTGAATTTCAAACACCAAGGATTCAGTGTGAACTACCACTGCTGGAATGAAGCATGG
ATGACAAGGCCTGACCTTCTGTGGATTTGGAGGCTGGCAAGCTGTGGACAGCACCCCC
CAGGAAAATAGCGATGGCATGTATCGGTGTGGCCCCGCTCGGTTCAAGCCATCAAGCAC
GGCCATGTCTGTTCCAATTTGATGCACCTTTTTTTTTGTCAGAGGTCAACAGCGACCTC
ATTTACATTACAGCTAAGAAAGATGGCACTCATGTGGTGGAAAATGTGGATGCCACCCAC
ATTGGGAAATTAATTGTGACCAAACAAATTGGAGGAGATGGCATGATGGATATTACTGAT
ACTTACAAATCCAAGAAGGTCAAGAAGAAGAGAGATTGGCCCTAGAAACTGCCCTGATG
TACGGAGCTAAAAAGCCCTCAACACAGAAGGTGTGATGAAATCAAGGTCCAACGTTGAC
ATGGACTTTGAAGTGGAAAATGCTGTGCTGGGAAAAGACTTCAAGCTCTCCATCACCTTC
CGGAACAACAGCCACAACCGTTACACCATCACAGCTTATCTCTCAGCCAACATCACCTTC
TACACCGGGTCCCGAAGGCAGAATTAAGAAGGAGACGTTGACGTGACGCTGGAGCCC
TTGTCCTTCAAGAAAGAGCGGTGCTGATCCAAGCCGGCGAGTACATGGGTGAGCTGCTG
GAACAAGCGTCCCTGCACTTCTTTGTACAGCTCGCATCAATGAGACCAGGGATGTTCTG
GCCAAGCAAAAAGTCCACCGTGCTAACCATCCCTGAGATCATCATCAAGGTCCGTGGCACT
CAGGTAGTTGGTTCTGACATGACTGTGACAGTTTCAGTTTACCAATCCTTTAAAAGAAACC
CTGCGAAATGTCTGGGTACACCTGGATGGTCTGGAGTAAACAAGACCAATGAAGAAGATG
TTCCGTGAAATCCGGCCCACTCCACCGTGCAGTGGGAAGAAGTGTGCCGGCCCTGGGTC
TCTGGGCATCGGAAGCTGATAGCCAGCATGAGCAGTGACTCCCTGAGACATGTGTATGGC
GAGCTGGACGTGCAGATTCAAAGACGACCTTCCATGTGA

```

Clone variation with respect to NM_000129.3
1954 g=>c

5' Read Nucleotide Sequence: >OriGene 5' read for NM_000129 unedited
GATTTTGTAAACGACTTTACTATANNNGCGGCCGCGCAATTCGGCACGAGGCCGAGGCCG
CACAGAGCAAGCCACGCGAGGGGACCTCTGGAGGGGAGCGCCTGCAGGACCTTGTAAAG
TCAAAAATGTCAGAACTTCCAGGACCGCCTTTGGAGGCAGAAGAGCAGTTCCACCCAAT
AACTCTAATGCAGCGGAAGATGACCTGCCACAGTGGAGCTTCAGGGCGTGGTCCCCCGG
GGCGTCAACCTGCAAGAGTTTCTTAATGTCACGAGCGTTACCTGTTCAAGGAGAGATGG
GACACTAACCAAGGTGGACCACCACACTGACAAGTATGAAAACAACAAGCTGATTGTCCGC
AGAGGGCAGTCTTTCTATGTGCAGATTGACTTCAGTCGTCCATATGACCCAGAAGGGAT
CTTTCAGGGTGAATACGTCATTGGTCTACTCCACAGGAGAACAAGGGAACTACATC
CCAGTGCCTATAGTCTCAGAGTTACAAAGTGGAAAGTGGGGGGCCAAGATTGTCATGAGA
GAGGACAGGTCTGTGCGGCTGTCCATCCAGTCTTCCCCAAATGTATTGTGGGAAATTC
CGCATGTATGTTGCTGTCTGGACTCCCTATGGCGTACTTCGAACCAAGTGCAAACCCAGAA
ACAGACACGTACATTCTTCAATCCTTGGTGTGAAGATGATGCTGTGTATCTGGACCAT
GAGAAAAGAAAGAGAAGAGTATGCCTGAATGACATCGNGTAATNTTTTATGGAGAGGTC
AATGACATCAAGACCAGAAGCTGGAGCTATGGTCAGTTTGAAGATGGCATCCTGGACACT
TGCTGTATGTGATGGACAGAGCACAAATGGACCTCTCTGGNAGAGGGAAATCCATCAAGT
CAGCCGTGTGGGTCTGCAATGGTGAATGCAAAGAGACGAAGGTGNCTCCGTGGAACCTG
GGACATATCTTGCCCT

3' Read Nucleotide Sequence: >OriGene 3' read for NM_000129 unedited
NNNNTTTTGACTTTGGACCGCGGCCGCATNCTAGGATCGAGTTTTTTTTTTTTTTTTTTTT
ATAATCAGTTTAACTTTATTTTAAAGCTTCTATTACATTGTAATTAATAATAATACTAA
GTTAAGCCAGTTTAACTGTCTAGCAAAATGCATTTCAATTTTAAAATTGGATATTGGGAGA
CTTGGCAAAATGCTGTGAGATTACTTAGTAAAGTTAAGTATGATGTATATAGAGGGGAC
CAGCTCACCTCATAGGTTAGTGCTGAAGGCTCAGGAACAGTCTCAAAGGCTTAGAAATG
TGGTTATATAGACCAGAGCATTCCATTCTGATTTTGGCCCAAGTATACTTATCACTGTTC
ATTTTTGCTAAGAATCACAGTCTACTGACCTAAATCACACCCTAGACATATCAGAGGGA
AATTCTGACCATAAATCAGCCTTGCAAATACATAGCAGGCAGCCTTCTCTGTAGTAGCCT
TGGAACATAATACAAATGATGTCAGCATCCTCTGTGGTTGGTTCAGAACTAGCACTGGCT
ATTTGCAAGGCTGAGTCCATATTACCCTTCAGCACCTGAGTGCCAAGCTGAGGTCTCAA
ATGGGTGATGTGAAGGACAAGAGAGAATCAGTGGCTGCAGTCCTTCTATATATCTGGTCA
CTAGATCCGCCAGCTTCTTCAACTTGTGGGCTTATTATATCTCTGAAAGGGGACCTGAA
CCTGCATCATTCTGCAAGGAGATGATTCTGAGAAATGGGTGAAATATATCACTAACTAA
AGAGATAATTCTTCACTTTACTTCTAGTATTGCATNCCAAAAGGGNTAAAGTAGGGGAT
ATTGGCTCTGCTGATCGGNCCACAGTGTGACCCATCTATAAATGCATCACAACACTACAT
ATTC

Restriction Sites: NotI-NotI

ACCN: NM_000129

Insert Size: 3870 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](#)

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_000129.2](#), [NP_000120.1](#)

RefSeq Size: 3833 bp

RefSeq ORF: 2199 bp

Locus ID: 2162

UniProt ID: [P00488](#)

Cytogenetics: 6p25.1

Domains: Transglutamin_C, TGc

Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: Complement and coagulation cascades

Gene Summary:

This gene encodes the coagulation factor XIII A subunit. Coagulation factor XIII is the last zymogen to become activated in the blood coagulation cascade. Plasma factor XIII is a heterotetramer composed of 2 A subunits and 2 B subunits. The A subunits have catalytic function, and the B subunits do not have enzymatic activity and may serve as plasma carrier molecules. Platelet factor XIII is comprised only of 2 A subunits, which are identical to those of plasma origin. Upon cleavage of the activation peptide by thrombin and in the presence of calcium ion, the plasma factor XIII dissociates its B subunits and yields the same active enzyme, factor XIIIa, as platelet factor XIII. This enzyme acts as a transglutaminase to catalyze the formation of gamma-glutamyl-epsilon-lysine crosslinking between fibrin molecules, thus stabilizing the fibrin clot. It also crosslinks alpha-2-plasmin inhibitor, or fibronectin, to the alpha chains of fibrin. Factor XIII deficiency is classified into two categories: type I deficiency, characterized by the lack of both the A and B subunits; and type II deficiency, characterized by the lack of the A subunit alone. These defects can result in a lifelong bleeding tendency, defective wound healing, and habitual abortion. [provided by RefSeq, Jul 2008]