

Product datasheet for **RG206464**

Factor XIIIa (F13A1) (NM_000129) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Factor XIIIa (F13A1) (NM_000129) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Factor XIIIa
Synonyms:	F13A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG206464 representing NM_000129
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCAGAAACTTCCAGGACCGCCTTTGGAGGCAGAAGAGCAGTTCACCCAATAACTCTAATGCAGCGG
 AAGATGACCTGCCACAGTGGAGCTTCAGGGCGTGGTGCCCGGGCGTCAACCTGCAAGAGTTTCTTAA
 TGTACAGAGCGTTCACCTGTTCAAGGAGAGATGGGACACTAACAAAGGTGGACCACCACACTGACAAGTAT
 GAAAACAACAAGCTGATTGTCCGCAGAGGGCAGTCTTTCTATGTGCAGATTGACTTCAGTCGTCATATG
 ACCCCAGAAGGGATCTCTTCAGGGTGGAAACGTCATTGGTTCGCTACCCACAGGAGAACAAGGGAACCTA
 CATCCCAGTGCCTATAGTCTCAGAGTTACAAGTGGAAAGTGGGGGCCAAGATTGTCATGAGAGAGGAC
 AGGTCTGTGCGGCTGCCATCCAGTCTTCCCCAAATGTATTGTGGGAAATTCCGCATGTATGTTGCTG
 TCTGGACTCCCTATGGCGTACTTCGAACCAGTCGAAACCCAGAAACAGACACGTACATTCTTCAATCC
 TTGGTGTGAAGATGATGTGTATCTGGACAATGAGAAAGAAAGAGAAGAGTATGTCCTGAATGACATC
 GGGGTAATTTTTATGGAGAGGTCAATGACATCAAGACCAGAAGCTGGAGCTATGGTCAGTTTGAAGATG
 GCATCCTGGACACTTGCCTGTATGTGATGGACAGAGCACAAATGGACCTCTCTGGAAGAGGGAATCCCAT
 CAAAGTCAGCCGTGTGGGTCTGCAATGGTGAATGCCAAAGATGACGAAGGTGTCCTCGTTGGATCCTGG
 GACAATATCTATGCCTATGGCGTCCCCCATCGGCCTGGACTGGAAGCGTTGACATTCTATTGGAATACC
 GGAGCTCTGAGAAATCCAGTCCGGTATGGCCAATGCTGGGTTTTGCTGGTGTCTTTAACACATTTTTACG
 ATGCCTTGAATACCAGCAAGAATTGTTACCAATATTTCTCTGCCCATGATAATGATGCCAATTTGCAA
 ATGGACATCTTCTGGAAGAAGATGGGAACGTGAATCCAAACTCACAAGGATTCAGTGTGGAATACC
 ACTGCTGGAATGAAGCATGGATGACAAGCCTGACCTTCTGTTGGATTGGAGGCTGGCAAGCTGTGGA
 CAGCACCCCCAGGAAAATAGCGATGGCATGTATCGGTGTGGCCCGCCTCGGTTCAAGCCATCAAGCAC
 GGCCATGTCTGCTTCCAATTTGATGCACCTTTTGTGTTTTGCAGAGGTCAACAGCGACCTCATTTACATTA
 CAGCTAAGAAAGATGGCACTCATGTGGTGGAAAATGTGGATGCCACCCACATTGGGAAATTAATTGTGAC
 CAAACAAATTGGAGGAGATGGCATGATGGATATTACTGATACTTACAAATCCAAGAAGGTCAAGAAGAA
 GAGAGATTGGCCCTAGAAAAGTCCCTGATGTACGGAGCTAAAAAGCCCTCAACACAGAAGGTGTCATGA
 AATCAAGGTCCAACGTTGACATGGACTTTGAAGTGGAAAATGCTGTGCTGGGAAAAGACTTCAAGCTCTC
 CATCACCTTCCGGAACAACAGCCACAACCGTTACACCATCACAGCTTATCTCTCAGCCAACATCACCTTC
 TACACCGGGTCCCGAAGGCAGAATTCAAGAAGGAGACGTTGACGCTGACGCTGGAGCCCTTGCTCCTTCA
 AGAAAGAGGCGGTGCTGATCCAAGCCGGCGAGTACATGGGTGAGCTGCTGGAACAAGCGTCCCTGCACTT
 CTTTGTACAGCTCGCATCAATGAGACCAGGGATGTTCTGGCCAAGCAAAAGTCCACCGTCTAACCATC
 CCTGAGATCATATCAAGGTCCGTGGCACTCAGGTAGTTGGTTCTGACATGACTGTGATAGTTGAGTTTA
 CCAATCCTTTAAAAGAAACCTGCGAAATGTCTGGGTACACCTGGATGGTCTGGAGTAACAAGACCAAT
 GAAGAAGATGTTCCGTGAAATCCGGCCAACTCCACCGTGCAGTGGGAAGAAGTGTCCGGCCCTGGGTC
 TCTGGGCATCGGAAGCTGATAGCCAGCATGAGCAGTACTCCCTGAGACATGTGTATGGCGAGCTGGACG
 TGCAGATTCAAAGACGACCTTCCATG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG206464 representing NM_000129
 Red=Cloning site Green=Tags(s)

MSETSRTAFGGRAVPPNNSNAEDDLPTVELQGVVPRGVNLQEFNLVTSVHLFKERWDTNKVDHHTDKY
 ENNKLIIVRRGQSFYVQIDFSRPYDPRRDLFRVEYVIGRYPQENKGTIYIPVPIVSELQSGKWGAKIVMRED
 RSVRLSIQSSPKCIVGKFRMYVAVWTPYGVLRTRSRNPETDYIILFNPWCEDDAVYLDNEKEREEYVLNDI
 GVIFYGQVNDIKTRSWSYGQFEDGILDTCLYMDRAQMDLSGRGNPIKVSRVGSAMVNAKDEGLVVGSW
 DNIYAYGVPPSAWTGSVDILLEYSSENVPVRYGQCWVFAGVFNTFLRCLGIPARIVTNYFSAHDNDANLQ
 MDIFLEEDGNVNSKLTKDSVWNYHCWNEAWMTRPDLVPGFQGWQAVDSTPQENS DGM YRCGPASVQAIKH
 GHVCFQFDAPFVFAEVNSDLIYITAKKDGTHVVENV DATHIGKLI VTKQIGDGMMDITDTYK FQEGQEE
 ERLALETALMYGAKKPLNTEGVMKSRSNVDMDFEVENAVL GKDFKLSITFRNNSHNRYTITAYLSANITF
 YTGVPKAEFKKETFDVTL EPLSFKKEAVLIQAGEYMGQLLEQASLHFFVTARINETRDVLAQKSTVLT I
 PEII IKVRGTQVVGSDMTVIVEF TNPLKETLRNVVHLDGPGVTRPMKKMFREIRPNSTVQWEEVCRPW
 SGHRKLIASMSDSL RHVYGELDVQIQRRPSM

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



ACCN: NM_000129

ORF Size: 2196 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_000129.3](#), [NP_000120.2](#)

RefSeq Size: 3863 bp

RefSeq ORF: 2199 bp

Locus ID: 2162

UniProt ID: [P00488](#)

Cytogenetics: 6p25.1

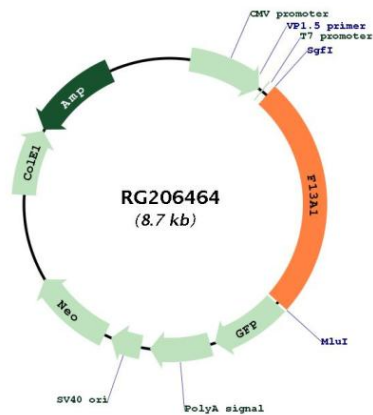
Domains: Transglutamin_C, TGc

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]

Product images:


Circular map for RG206464