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Product datasheet for RC206464

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:	Myc-DDK
Symbol:	Factor XIIIa
Synonyms:	F13A
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC206464 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCAGAAACTTCCAGGACCGCCTTTGGAGGCAGAAGAGCAGTTCCACCCAATAACTCTAATGCAGCGG
AAGATGACCTGCCCACAGTGGAGCTTCAGGGCGTGGTGCCCCGGGGCGTCAACCTGCAAGAGTTTCTTAA
TGTCACGAGCGTTCACCTGTTCAAGGAGAGATGGGACACTAACAAGGTGGACCACCACACTGACAAGTAT
GAAAACAACAAGCTGATTGTCCGCAGAGGGCAGTCTTTCTATGTGCAGATTGACTTCAGTCGTCCATATG
ACCCCAGAAGGGATCTCTTCAGGGTGGAATACGTCATTGGTCGCTACCCACAGGAGAACAAGGGAACCTA
CATCCCAGTGCCTATAGTCTCAGAGTTACAAAGTGGAAAGTGGGGGGCCAAGATTGTCATGAGAGAGGAC
AGGTCTGTGCGGCTGTCCATCCAGTCTTCCCCCAAATGTATTGTGGGGAAATTCCGCATGTATGTTGCTG
TCTGGACTCCCTATGGCGTACTTCGAACCAGTCGAAACCCAGAAACAGACACGTACATTCTCTTCAATCC
TTGGTGTGAAGATGATGCTGTGTATCTGGACAATGAGAAAGAAAGAGAAGAGTATGTCCTGAATGACATC
GGGGTAATTTTTTATGGAGAGGTCAATGACATCAAGACCAGAAGCTGGAGCTATGGTCAGTTTGAAGATG
GCATCCTGGACACTTGCCTGTATGTGATGGACAGAGCACAAATGGACCTCTCTGGAAGAGGGAATCCCAT
CAAAGTCAGCCGTGTGGGGTCTGCAATGGTGAATGCCAAAGATGACGAAGGTGTCCTCGTTGGATCCTGG
GACAATATCTATGCCTATGGCGTCCCCCCATCGGCCTGGACTGGAAGCGTTGACATTCTATTGGAATACC
GGAGCTCTGAGAATCCAGTCCGGTATGGCCAATGCTGGGTTTTTGCTGGTGTCTTTAACACATTTTTACG
ATGCCTTGGAATACCAGCAAGAATTGTTACCAATTATTTCTCTGCCCATGATAATGATGCCAATTTGCAA
ATGGACATCTTCCTGGAAGAAGATGGGAACGTGAATTCCAAACTCACCAAGGATTCAGTGTGGAACTACC
ACTGCTGGAATGAAGCATGGATGACAAGGCCTGACCTTCCTGTTGGATTTGGAGGCTGGCAAGCTGTGGA
CAGCACCCCCCAGGAAAATAGCGATGGCATGTATCGGTGTGGCCCCGCCTCGGTTCAAGCCATCAAGCAC
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CAGCTAAGAAAGATGGCACTCATGTGGTGGAAAATGTGGATGCCACCCACATTGGGAAATTAATTGTGAC
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GAGAGATTGGCCCTAGAAACTGCCCTGATGTACGGAGCTAAAAAGCCCCTCAACACAGAAGGTGTCATGA
AATCAAGGTCCAACGTTGACATGGACTTTGAAGTGGAAAATGCTGTGCTGGGAAAAGACTTCAAGCTCTC
CATCACCTTCCGGAACAACAGCCACAACCGTTACACCATCACAGCTTATCTCTCAGCCAACATCACCTTC
TACACCGGGGTCCCGAAGGCAGAATTCAAGAAGGAGACGTTCGACGTGACGCTGGAGCCCTTGTCCTTCA
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CCTGAGATCATCATCAAGGTCCGTGGCACTCAGGTAGTTGGTTCTGACATGACTGTGATAGTTGAGTTTA
CCAATCCTTTAAAAGAAACCCTGCGAAATGTCTGGGTACACCTGGATGGTCCTGGAGTAACAAGACCAAT
GAAGAAGATGTTCCGTGAAATCCGGCCCAACTCCACCGTGCAGTGGGAAGAAGTGTGCCGGCCCTGGGTC
TCTGGGCATCGGAAGCTGATAGCCAGCATGAGCAGTGACTCCCTGAGACATGTGTATGGCGAGCTGGACG
TGCAGATTCAAAGACGACCTTCCATG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC206464 protein sequence
Red=Cloning site Green=Tags(s)

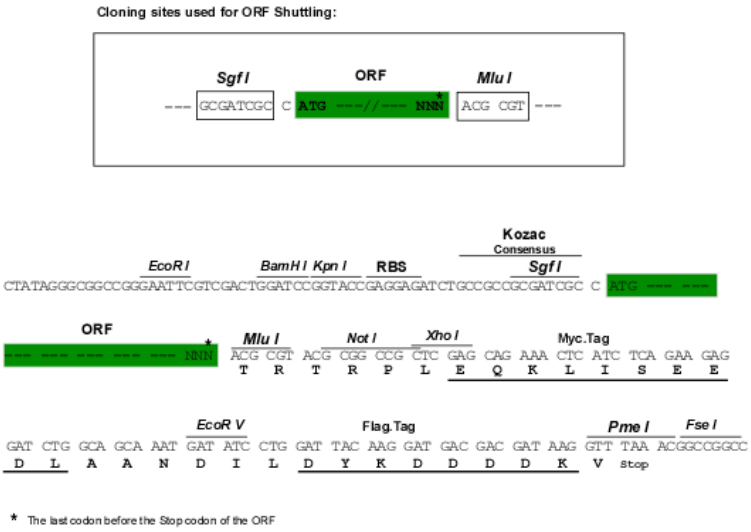
MSETSRTAFGGRRAVPPNNSNAAEDDLPTVELQGVVPRGVNLQEFLNVTSVHLFKERWDTNKVDHHTDKY
ENNKLIVRRGQSFYVQIDFSRPYDPRRDLFRVEYVIGRYPQENKGTYIPVPIVSELQSGKWGAKIVMRED
RSVRLSIQSSPKCIVGKFRMYVAVWTPYGVLRTSRNPETDTYILFNPWCEDDAVYLDNEKEREEYVLNDI
GVIFYGEVNDIKTRSWSYGQFEDGILDTCLYVMDRAQMDLSGRGNPIKVSRVGSAMVNAKDDEGVLVGSW
DNIYAYGVPPSAWTGSVDILLEYRSSENPVRYGQCWVFAGVFNTFLRCLGIPARIVTNYFSAHDNDANLQ
MDIFLEEDGNVNSKLTKDSVWNYHCWNEAWMTRPDLPVGFGGWQAVDSTPQENSDGMYRCGPASVQAIKH
GHVCFQFDAPFVFAEVNSDLIYITAKKDGTHVVENVDATHIGKLIVTKQIGGDGMMDITDTYKFQEGQEE
ERLALETALMYGAKKPLNTEGVMKSRSNVDMDFEVENAVLGKDFKLSITFRNNSHNRYTITAYLSANITF
YTGVPKAEFKKETFDVTLEPLSFKKEAVLIQAGEYMGQLLEQASLHFFVTARINETRDVLAKQKSTVLTI
PEIIIKVRGTQVVGSDMTVIVEFTNPLKETLRNVWVHLDGPGVTRPMKKMFREIRPNSTVQWEEVCRPWV
SGHRKLIASMSSDSLRHVYGELDVQIQRRPSM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6140_h08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



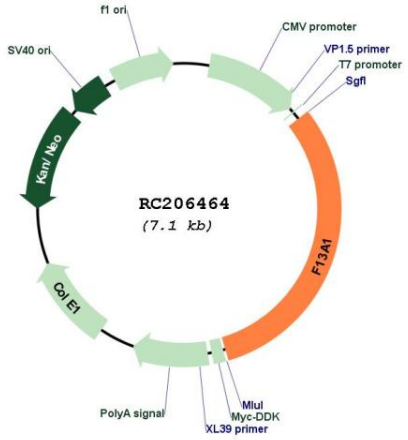
ACCN: NM_000129

ORF Size: 2196 bp

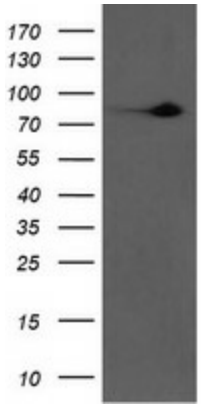
OTI Disclaimer:	Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000129.4
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
MW:	83.3 kDa

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]

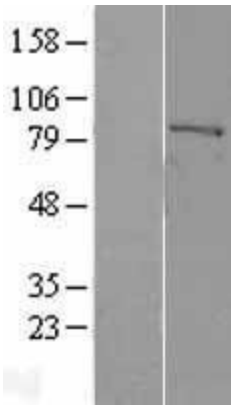
Product images:



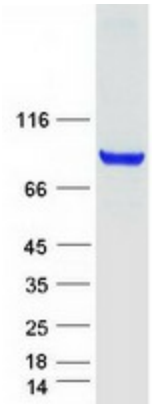
Circular map for RC206464



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY F13A1 (Cat# RC206464, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-F13A1(Cat# [TA800352]). Positive lysates [LY400044] (100ug) and [LC400044] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400044]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206464 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified F13A1 protein (Cat# [TP306464]). The protein was produced from HEK293T cells transfected with F13A1 cDNA clone (Cat# RC206464) using MegaTran 2.0 (Cat# [TT210002]).