

Product datasheet for **RG224108**

Factor XII (F12) (NM_000505) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Factor XII
Synonyms:	HAEX3; HAEX; HAF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



ORF Nucleotide Sequence: >RG224108 representing NM_000505
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTGTGAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGAGGGCTCTGCTGCTCCTGGGGTTCCTGCTGGTGAGCTTGAGTCAACACTTTCGATTCCACCTTGGG
 AAGCCCCCAAGGAGCATAGTACAAAGCTGAAAGACACAGTCGTTCTCACTGTCACCGGGGAGCCCTG
 CCATTTCCCCTTCCAGTACCACCGGAGCTGTACCACAAATGTACCACAAGGGCCGGCCAGGCCCTCAG
 CCCTGGTGTGCTACCACCCCCAATTTGATCAGGACGAGGATGGGGATACTGTTTGGAGCCCAAGAAAG
 TGAAAGACCACTGCAGCAACACAGCCCCGTCAGAAAGGAGGGACCTGTGTGAACATGCCAAGCGGCC
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 TCAGGAGGATGCGGACGCGAGCTGCGCGCTCTGTGCGCTTACGTTACGCGGTGTGCTGCCAAGCGCG
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 GCACGGATCTCTCTCTCCCGGATGCTCTGCGCAGGGTCTCGAGGGCGGACCGATGCGTGCCAG
 GGTGATTCCGAGGCGCGCTGGTGTGTGAGGACCAAGCTGCAGAGCGCGGCTCACCTGCAAGGCATCA
 TCAGCTGGGGATCGGGCTGTGGTGACCGCAACAAGCCAGGCGTCTACACCGATGTGGCTACTACCTGGC
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTAA

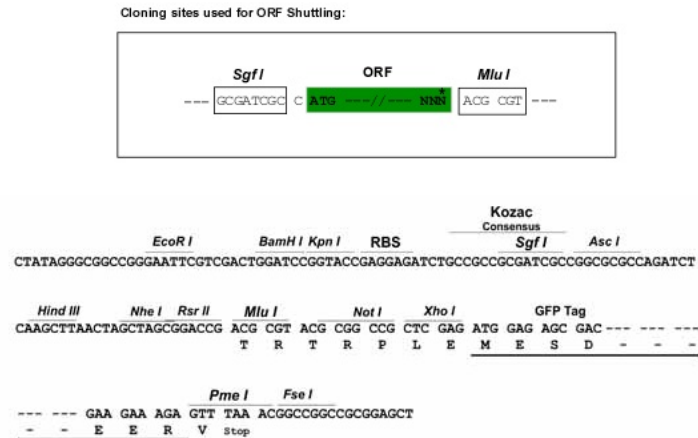
Protein Sequence: >RG224108 representing NM_000505
 Red=Cloning site Green=Tags(s)

MRALLLLGFLLVSESTLSIPPWEAPKEHKYAEHETVVLVTGEPCHFPPQYHRQLYHKCTHKGRPGPQ
 PWCATTPNFDQDQRWGYCLEPKVKDHCSPKQKGGTCVNMPSGPHCLCPQHLTGNNHCQKEKCFEPQL
 LRFFHKNEIYRTEQAAYARCQCKGPDHACQRLASQACRTNPCLHGGRCLEVEGHRLLCHPVGTYGPFCD
 VDTKASCYDGRGLSYRGLARTTSGAPCQWASEATYRNVTAEQARNWGLGGHAFCRNPDNDIRPWCFL
 NRDLRSLWEYCDLAQCQTPTQAAPPTPVSPRLHVPLMPAQPAPPKPQPTTRTPPQSTPGALPAKREQPPS
 LTRNGPLSCGQRLRKSLSMTRVVVGLVALRGAPYIAALYWGHSFCAGSLIAPCWVLTAAHCLQDRPAP
 EDLTVVLGQERRNHSCEPCQTLAVRSYRLHEAFSPVSYQHDLALLRLQEDADGSCALLSPYVQPVCLPSG
 AARPSETTLQVAGWGHQFEGAEYASFLQEAQVPFLSLERCSAPDVHGSSILPGMLCAGFLEGGTDACQ
 GDSGGPLVCEDQAERRLTLQGIISWGS CGDRNKPGVYTDVAYYLAWIREHTVS

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000505

ORF Size: 1845 bp

OTI Disclaimer: 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_000505.2](#), [NP_000496.1](#)

RefSeq Size: 2048 bp

RefSeq ORF: 1848 bp

Locus ID: 2161

UniProt ID: [P00748](#)

Cytogenetics: 5q35.3

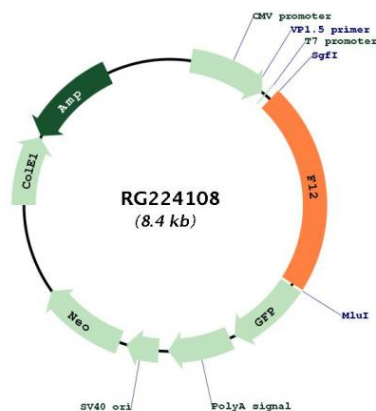
Domains: KR, FN1, FN2, Tryp_SPc, EGF, EGF

Protein Families: Druggable Genome, Protease, Secreted Protein

Protein Pathways: Complement and coagulation cascades

Gene Summary: This gene encodes coagulation factor XII which circulates in blood as a zymogen. This single chain zymogen is converted to a two-chain serine protease with an heavy chain (alpha-factor XIIa) and a light chain. The heavy chain contains two fibronectin-type domains, two epidermal growth factor (EGF)-like domains, a kringle domain and a proline-rich domain, whereas the light chain contains only a catalytic domain. On activation, further cleavages takes place in the heavy chain, resulting in the production of beta-factor XIIa light chain and the alpha-factor XIIa light chain becomes beta-factor XIIa heavy chain. Prekallikrein is cleaved by factor XII to form kallikrein, which then cleaves factor XII first to alpha-factor XIIa and then to beta-factor XIIa. The active factor XIIa participates in the initiation of blood coagulation, fibrinolysis, and the generation of bradykinin and angiotensin. It activates coagulation factors VII and XI. Defects in this gene do not cause any clinical symptoms and the sole effect is that whole-blood clotting time is prolonged. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG224108