

Product datasheet for **RG221914**

Factor VIII (F8) (NM_000132) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Factor VIII (F8) (NM_000132) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	F8
Synonyms:	AHF; DXS1253E; F8B; F8C; FVIII; HEMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG221914 representing NM_000132 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

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ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

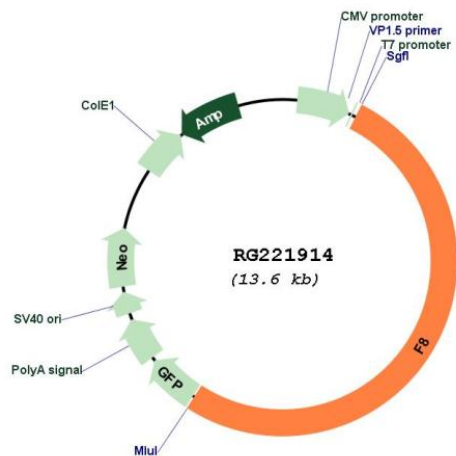
Protein Sequence: >RG221914 representing NM_000132
 Red=Cloning site Green=Tags(s)

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 QVNNPKEWLQVDFQKTMKVTGVTTQGVKSLLSMYVKEFLISSSQDGHQWTLFFQNGKVKVFGQNGQDSFT
 PVVNSLDPPLLTRYLRIHPQSWVHQIALRMEVLGCEAQDLY

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Plasmid Map:



ACCN: NM_000132
 ORF Size: 7053 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_000132.4](#)

RefSeq Size: 9048 bp

RefSeq ORF: 7056 bp

Locus ID: 2157

UniProt ID: [P00451](#)

Cytogenetics: Xq28

Domains: F5_F8_type_C, Cu-oxidase

Protein Families: Druggable Genome, Secreted Protein

Protein Pathways: Complement and coagulation cascades

Gene Summary:

This gene encodes coagulation factor VIII, which participates in the intrinsic pathway of blood coagulation; factor VIII is a cofactor for factor IXa which, in the presence of Ca²⁺ and phospholipids, converts factor X to the activated form Xa. This gene produces two alternatively spliced transcripts. Transcript variant 1 encodes a large glycoprotein, isoform a, which circulates in plasma and associates with von Willebrand factor in a noncovalent complex. This protein undergoes multiple cleavage events. Transcript variant 2 encodes a putative small protein, isoform b, which consists primarily of the phospholipid binding domain of factor VIIIc. This binding domain is essential for coagulant activity. Defects in this gene results in hemophilia A, a common recessive X-linked coagulation disorder. [provided by RefSeq, Jul 2008]