

## Product datasheet for SC109206

### Factor VIII (F8) (NM\_019863) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Factor VIII (F8) (NM_019863) Human Untagged Clone
Tag:	Tag Free
Symbol:	Factor VIII
Synonyms:	AHF; DXS1253E; F8B; F8C; FVIII; HEMA
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC109206 sequence for NM_019863 edited (data generated by NextGen Sequencing) ATGCGGATCCAAGACCCCTGGGAAGTCTTCTTTGGCAATGTGGATTCATCTGGGATAAAA CACAAATATTTTTAACCCCTCCAATTATTGCTCGATACATCCGTTTGCACCCAACCTATTAT AGCATTTCGCAGCACTCTTCGCATGGAGTTGATGGGCTGTGATTTAAATAGTTGCAGCATG CCATTGGGAATGGAGAGTAAAGCAATATCAGATGCACAGATTACTGCTTCATCCTACTTT ACCAATATGTTTGCCACCTGGTCTCCTTCAAAAGCTCGACTTCACCTCCAAGGGAGGAGT AATGCCTGGAGACCTCAGGTGAATAATCCAAAAGAGTGGCTGCAAGTGGACTTCCAGAAG ACAATGAAAGTCACAGGAGTAACTACTCAGGGAGTAAATCTCTGCTTACCAGCATGTAT GTGAAGGAGTTCCTCATCTCCAGCAGTCAAGATGGCCATCAGTGGACTCTCTTTTTTCAG AATGGCAAAGTAAAGTTTTTCAGGGAAATCAAGACTCCTTCACACCTGTGGTGAACCTCT CTAGACCCACCGTTACTGACTCGCTACCTTCGAATTCACCCCAGAGTTGGGTGCACCAG ATTGCCCTGAGGATGGAGTTCTGGGCTGCGAGGCACAGGACCTCTACTGA
	Clone variation with respect to NM_019863.2



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_019863 unedited</p> <pre>GGTCGCATTTTCGACACACGTTTCACTATAGGCGGCCGCGCAATTCGCACGAGGCCCTGA TGACGTGCAAAGAGCGGCATCGGAGGCGGGGCTGGCCGGGCTGTGAGCGCGTATGCAA ATCGAGGGTCTCGGGGATGCGGATCCAAGACCCTGGGAAGGTCTTCTTTGGCAATGTGGA TTCATCTGGGATAAAACACAATATTTTTAACTCTTTTTATTATTGCTCGATACATCCGTT TGGACCAACTCATTATAGCATTTCGAGCACTCTTCGCATGGAGTTGATGGGCTGTGATT CGAATAGTTGCAGCATGCCATTGGGAATGGAGAGTAAAGCAATATCAGATGCACAGATTA CTGCTTATCCTACTTTACCAATATGTTTGCCACCTGGTCTCCTTCAAAAAGCTCGACTTC ACCTCCAAGGGAGGAGTAATGCCTGGAGACCTCAGGCGAATAATCCAAAAGAGTGCTGTC AAGTGGACTTCCAGAAGACAATGAAAGTCACAGGAGTAACTACTCACGGAGTAAAATCTC TGCTTACCAGCATGTATGTGAAGGAGTTTCTCATCTCCACCAGCCAAGACGGTCAACAGC GCACTCTCTTTCCACAATGGGACAGTAAAGTTCTTAGGGAAATCAAGACTCCTTCA CACCTGTGGTGAAGTCTTAGACCCACCGTTACTGACTCGCTACCTTGAATTCACCCCC ACACTTGGGTGCACCCATTGCCCTGAGGACGGAGTTCTGGGCTTGAAGCACAGGACC TTCTACTGAGGCGCCACTGCAGCACCTGCAACTGGCGCAACTCTCCCTCCTCAGCTCA GGGGAGTGTCCCTCCCTGGCTTACCTTCGCGCCAAACCTACCAAAAACCTCGCTC TGAACCTCCGGAATCAN</pre>
<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_019863 unedited</p> <pre>ACTATGGACCGCGGCCCAATCTAGGATCGAGTTTTTTTTTTTTTTTTTTTGTATGTGTC AATGTTTTATTTAACTCATTACTGAAGAAACCAGCAGGAAAATAAAGAGCTAGTTCCAT GAACATTTGAGAAATAGAGATGTATATAGTCAATGGGAAAAGAATGCCAAAATAAGATTA TTAAGTTAAACATAACAGGAAATAAAACCATATCACCTTTGGGGTTAACTCCTTACCGG GCTATAAAACAAAACAACCTTATTCAATTTCTGTAAGTTAGCTCTAAACTTAAAGAACTTC ACAGGGCTATAAAACCATTTGCACCTGCATCATTTGTGGATTGTGACTATACTGTGACAGC TATGTTATAGTTTCCAAAGAGGTCAGATAAAGGTCAGCAGGATTATTAGAAAATACTCC AGCATAGAAAAAGTAGCCATTCTTTGGCTTTTCTCAGATTGGGATCCATTTTTCTTTT ATATTAGGATCTCCTGTTTTCCATTTGCCCTGGGTTGCAATCTTTGGATGCTTCTCCAA CTGCTCTATAACTTATCCTTGCCCTCCAGCCCCCTTACTATCAGGAGATTCTGTGTAGTC ATAGTGAAGGGGTGAGGAGATGGAAGGAGCAGTAAACCTTCAACAATCTTATGGGGGTG GAGGGCAAGAANGGGATCCTATTGTGTGGTATATGGCAGACTGGAGTGTTTTTTCTGT TTTACCAGTCCAATTTTCTTCTGACCTCCTTGATATTTCAACTATGTAAGTAGGACTCT AGGTTTCAGTCACGGTATATAATTTCCCTGTTACATTGTTTGTGGTTATTTTCAGCA GGAAATAGTAGAGGGAGAAAGTAAACTGATTGCATTATTAGATTACAAATTTGTATCTCC TTCTT</pre>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_019863
<b>Insert Size:</b>	2560 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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\\_019863.2](#), [NP\\_063916.1](#)

**RefSeq Size:** 2617 bp

**RefSeq ORF:** 651 bp

**Locus ID:** 2157

**UniProt ID:** [P00451](#)

**Cytogenetics:** Xq28

**Domains:** F5\_F8\_type\_C

**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 Ca<sup>2+</sup> 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]

Transcript Variant: This variant (2) contains an unique 5' exon located within intron 22 of transcript variant 1. This exon codes for eight amino acids and is spliced to exons 23-26 maintaining the reading frame. The resulting isoform (b) is considerably shorter compared to isoform a, and includes the phospholipid binding domain.