

# Recombinant Human Coagulation Factor VIII, Procoagulant Component

Cat. No. F8-125H Lot. No. (See product label)

## SPECIFICATION

### Product Overview

Recombinant Human F8 lacks central region of B-domain region and is purified by proprietary chromatographic techniques.

### Species

Human

### Source

CHO

### Description

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.

### Molecular Mass

Antihemophilic Factor Human Recombinant produced in CHO is a glycosylated polypeptide chain having a total amino acids of 1438 (170kd) and consisting of two dimer chains 80 kD and 90 kD.

### Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

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<b>Formulation</b>	The protein was lyophilized from a solution containing 50mM histidine, 0.3M NaCl, 5mM CaCl <sub>2</sub> , 0.02% Tween 80, 20mM sucrose, pH- 6.8.
<b>Purity</b>	Greater than 97.0% as determined by SDS-PAGE.
<b>Solubility</b>	It is recommended to reconstitute the lyophilized Factor-VIII in 1ml sterile 18MΩ-cm H <sub>2</sub> O, which can then be further diluted to other aqueous solutions.
<b>Biological Activity</b>	The specific activity was found to be 7428IU/mg.
<b>Stability</b>	Lyophilized Factor-VIII although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Factor-VIII should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles
<b>OfficialSymbol</b>	F8
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	<a href="#">F8 coagulation factor VIII, procoagulant component [ Homo sapiens ]</a>
<b>Synonyms</b>	F8; coagulation factor VIII, procoagulant component; AHF; F8B; F8C; HEMA; FVIII; DXS1253E; Factor VIIF8B; hemophilia A; Antihemophilic factor; Procoagulant component; coagulation factor VIII; coagulation factor VIIfc; coagulation factor VIII; OTTHUMP00000061446; OTTHUMP00000196174; Coagulation factor VIII; Factor VIIfa heavy chain, 200 kDa isoform; Factor VIIfa heavy chain, 92 kDa isoform; Factor VIII B chain; Factor VIIfa light chain
<b>Gene ID</b>	<a href="#">2157</a>
<b>mRNA Refseq</b>	<a href="#">NM_000132</a>

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<b>Protein Refseq</b>	NP_000123
<b>MIM</b>	300841
<b>UniProt ID</b>	P00451
<b>Chromosome Location</b>	Xq28
<b>Pathway</b>	Complement and coagulation cascades; Hemostasis
<b>Function</b>	copper ion binding; oxidoreductase activity; protein binding

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