

# Native Human F10

**Cat. No.** F10-26055TH    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <b>Product Overview</b>    | Full length native human Factor Xa, prepared by activating purified factor X with the factor X activator isolated from Russells viper venom.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>         | This gene encodes the vitamin K-dependent coagulation factor X of the blood coagulation cascade. This factor undergoes multiple processing steps before its preproprotein is converted to a mature two-chain form by the excision of the tripeptide RKR. Two chains of the factor are held together by 1 or more disulfide bonds; the light chain contains 2 EGF-like domains, while the heavy chain contains the catalytic domain which is structurally homologous to those of the other hemostatic serine proteases. The mature factor is activated by the cleavage of the activation peptide by factor IXa (in the intrinsic pathway), or by factor VIIa (in the extrinsic pathway). The activated factor then converts prothrombin to thrombin in the presence of factor Va, Ca <sup>2+</sup> , and phospholipid during blood clotting. Mutations of this gene result in factor X deficiency, a hemorrhagic condition of variable severity. |
| <b>Tissue specificity</b>  | Plasma; synthesized in the liver.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Biological activity</b> | Specific activity is ~1000 units/mg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Form</b>                | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Storage buffer</b>      | Preservative: None<br>Constituents: 50% Glycerol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage</b>               | Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.                                                                                                                                        |
| <b>Sequence Similarities</b> | Belongs to the peptidase S1 family.Contains 2 EGF-like domains.Contains 1 Gla (gamma-carboxy-glutamate) domain.Contains 1 peptidase S1 domain.                                                                                        |
| <b>Full Length</b>           | Full L.                                                                                                                                                                                                                               |
| <b>GENE INFORMATION</b>      |                                                                                                                                                                                                                                       |
| <b>Gene Name</b>             | F10 coagulation factor X [ Homo sapiens ]                                                                                                                                                                                             |
| <b>Official Symbol</b>       | F10                                                                                                                                                                                                                                   |
| <b>Synonyms</b>              | F10; coagulation factor X;                                                                                                                                                                                                            |
| <b>Gene ID</b>               | 2159                                                                                                                                                                                                                                  |
| <b>mRNA Refseq</b>           | NM_000504                                                                                                                                                                                                                             |
| <b>Protein Refseq</b>        | NP_000495                                                                                                                                                                                                                             |
| <b>MIM</b>                   | 613872                                                                                                                                                                                                                                |
| <b>Uniprot ID</b>            | P00742                                                                                                                                                                                                                                |
| <b>Chromosome Location</b>   | 13q34                                                                                                                                                                                                                                 |
| <b>Pathway</b>               | Blood Clotting Cascade, organism-specific biosystem; Common Pathway, organism-specific biosystem; Complement and Coagulation Cascades, organism-specific biosystem; Complement and coagulation cascades, organism-specific biosystem; |

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Complement and coagulation cascades, conserved biosystem;

**Function**

calcium ion binding; peptidase activity; phospholipid binding; protein binding; serine-type endopeptidase activity;

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