

## Recombinant Human F2 Protein

**Cat. No.** F2-789H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b> | Recombinant human F2 protein without tag was expressed in HEK293.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | HEK293                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>ProteinLength</b>    | 622                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Description</b>      | <p>This gene encodes the prothrombin protein (also known as coagulation factor II). This protein is proteolytically cleaved in multiple steps to form the activated serine protease thrombin. The activated thrombin enzyme plays an important role in thrombosis and hemostasis by converting fibrinogen to fibrin during blood clot formation, by stimulating platelet aggregation, and by activating additional coagulation factors. Thrombin also plays a role in cell proliferation, tissue repair, and angiogenesis as well as maintaining vascular integrity during development and postnatal life. Peptides derived from the C-terminus of this protein have antimicrobial activity against <i>E. coli</i> and <i>P. aeruginosa</i>. Mutations in this gene lead to various forms of thrombosis and dysprothrombinemia. Rapid increases in cytokine levels following coronavirus infections can dysregulate the coagulation cascade and produce thrombosis, compromised blood supply, and organ failure.</p> |
| <b>Form</b>             | Lyophilized                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Molecular Mass</b>   | 69.5 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AA Sequence</b>    | MAHVRGLQLPGCLALAALCSLVHSQHVFAPQQARSLQVRRRANTFLEEVRKGNL<br>ERECVEETCSYEEAFEALSSSTATDVFWAKYTACETARTPRDKLAACLEGNAEGL<br>GTNYRGHVNITRSGIECQLWRSRYPHKPEINSTTHPGADLQENFCRNPDSSTTGPW<br>CYTTDPTVRRQECSIPVCGQDQVTAMTPRSEGSSVNLSPPLEQCVPDRGQQYQG<br>RLAVTTHGLPCLAWASQAQAKALSKHQDFNSAVQLVENFCRNPDGDEEGVWCYVAG<br>KPGDFGYCDLNYCEEAVEEETGDGLDESDRAIEGRTATSEYQTFNPRTFGSGEA<br>DCGLRPLFEKKSLEDKTERELLESYIDGRIVEGSDAEIGMSPWQVMLFRKSPQELLC<br>GASLISDRWVLTAAHCLLYPPWDKNFTENDLLVRIGKHSRTRYERNIEKISMLEKIYIH<br>PRYNWRENLDRIALMKLKKPVAFSDYIHPVCLPDRETAASLLQAGYKGRVTGWGN<br>LKETWTANVGKGQPSVLQVVNLPIVERPVCKDSTRIRITDNMFCAGYKPDEGKRGD<br>ACEGDSGGPFVMKSPFNRRWYQMGIVSWGEGCDRDGKYGFYTHVFRLLKKWIKVI<br>DQFGE |
| <b>Purity</b>         | > 98%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Applications</b>   | WB; ELISA; FACS; FC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Stability</b>      | This bioreagent is stable at 4 centigrade (short-term) and -70 centigrade(long-term).<br>After reconstitution, sample may be stored at 4 centigrade for 2-7 days and below -18<br>centigrade for future use.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>        | At -20 centigrade.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Concentration</b>  | 1 mg/mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Storage Buffer</b> | PBS (pH 7.4-7.5). Sterile-filtered colorless solution.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Reconstitution</b> | Reconstitute in sterile distilled H <sub>2</sub> O to no less than 100 µg/mL; dilute reconstituted<br>stock further in other aqueous solutions if needed. Please review COA for lot-specific<br>instructions. Final measurements should be determined by the end-user for optimal                                                                                                                                                                                                                                                                                                                                                                                                    |

performance.

## GENE INFORMATION

|                 |                                                                                                     |
|-----------------|-----------------------------------------------------------------------------------------------------|
| Gene Name       | F2 coagulation factor II (thrombin) [ Homo sapiens (human) ]                                        |
| Official Symbol | F2                                                                                                  |
| Synonyms        | F2; coagulation factor II (thrombin); prothrombin; serine protease; prothrombin B-chain; PT; THPH1; |
| Gene ID         | 2147                                                                                                |
| mRNA Refseq     | NM_000506                                                                                           |
| Protein Refseq  | NP_000497                                                                                           |
| MIM             | 176930                                                                                              |
| UniProt ID      | P00734                                                                                              |

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