

Recombinant Human THRB Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50962

Size: 10ug, 100ug

Protein Name: Prothrombin (EC 3.4.21.5) (Coagulation factor II) [Cleaved into: Activation peptide fragment 1; Activation peptide fragment 2; Thrombin light chain; Thrombin heavy chain]

Synonym: F2

UniProt ID: P00734

UniProt Link: www.uniprot.org/uniprotkb/P00734/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 622 AA

Molecular Weight: 70 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAHVRGLQLPGCLALAALCSLVHSQHVFAPQQARSLLQVRRRANTFLEEVRKGNLERECVEETCS
YEEAFEALSSSTATDVFwakYTACETARTPRDKLAACLEGNCAEGLGTNYRGHVNITRSGIECQLW
RSRYPHKPEINSTTHPGADLQENFCRNPDSSTTGPWCYTDDPTVRRQECSIPVCGQDQVTVAMTPR
SEGSSVNLSPPLEQCVPDRGQQYQGRLAVTTHGLPCLAWASAAKALSKHQDFNSAVQLVENFCR
NPDGDEEGVWCYVAGKPGDFGYCDLNYCEEAVEEETGDGLDEDSRAIEGRTATSEYQTFNPR
FGSGEADCGLRPLFEKKSLEDKTERELLESYIDGRIVEGSDAEIGMSPWQVMLFRKSPQELLCGASLI
SDRWVLTAAHCLLYPPWDKNFTENDLLVRIGKHSRTRYERNIEKISMLEKIYHPRYNWRENLDRIA
LMKLKKPVAFSDYIHPVCLPDRETAASLLQAGYKGRVTGWGNLKETWTANVGKGQPSVLQVVNLPI
VERPVCKDSTRITDNMFCAGYKPDEGKRGDACEGDSGGPFVMMKSPFNRRWYQMGIVSWGEGC
DRDGKYGFYTHVFRLLKKWIKVIDQFGE

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Prothrombin (EC 3.4.21.5) (Coagulation factor II) [Cleaved into: Activation peptide fragment 1; Activation peptide fragment 2; Thrombin light chain; Thrombin heavy chain] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Thrombin, which cleaves bonds after Arg and Lys, converts fibrinogen to fibrin and activates factors V, VII, VIII, XIII, and, in complex with thrombomodulin, protein C. Functions in blood homeostasis, inflammation and wound healing. Activates coagulation factor XI (F11); activation is promoted by the contact with negatively charged surfaces (PubMed:2019570, PubMed:21976677). Triggers the production of pro-inflammatory cytokines, such as MCP-1/CCL2 and IL8/CXCL8, in endothelial cells (PubMed:30568593, PubMed:9780208).

Subcellular Localization: Secreted, extracellular space.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.