

# Prothrombin, Human Plasma

**CATALOG #:** 7684-1 1 mg

**ALTERNATE NAMES:** Coagulation factor II

**SOURCE:** Human Plasma. purified from Human plasma that was tested and found negative by FDA accepted methods for Anti-HIV1/2, Anti-HTLV I & II, HBsAg, Anti-HCV, Syphilis, HBC Ab, HIV-1 p24 Ag or HIV-1 RNA, HCV RNA and HBV RNA. Donors are screened for CJD (Creutzfeldt-Jakob Disease).

**MOL. WEIGHT:** 72 kDa

**PURITY:** ≥ 95% by SDS-PAGE; Shows no reduction upon incubation with 2-mercaptoethanol.

**EXTINCTION COEFFICIENT (1%):** 13.6

**FORM:** Liquid

**FORMULATION:** In 20 mM Tris-HCl, 0.1 M NaCl pH 7.4

**STORAGE CONDITIONS:** Store at -60°C or lower. Avoid repeated freezing and thawing cycles.

**DESCRIPTION:** Prothrombin is a vitamin K-dependent plasma protein which is synthesized in the liver. Prior to secretion into plasma, prothrombin undergoes post-translational modification by a vitamin K-dependent carboxylase which converts ten specific glutamic acid residues to γ-carboxyglutamic acid (gla). Conversion to thrombin is a key step in the blood coagulation pathway and catalyzes the coagulation of fibrinogen. Clinically, cases of selective deficiency are rare, although, in cases of liver cirrhosis, prothrombin is decreased. During activation, prothrombin is cleaved at Arg271-Thr272 and at Arg320-Ser321 to a "pro" fragment (fragment 1.2) and thrombin, the latter of which is composed of two chains covalently linked by a disulfide bond. There is an additional thrombin feed-back cleavage at Arg284-Thr285 resulting in an additional 13 amino acids being removed from the mature thrombin "A" chain.

## RELATED PRODUCTS:

- Protein C, Human Plasma (**Cat. No. 7682-50**)
- Factor Va, Human Plasma (**Cat. No. 4098-10, 50**)
- Thrombin, Active, Porcine blood (**Cat. No. 7590-1, 10, 100**)
- Thrombin, Active, Bovine Plasma (Technical grade) (**Cat. No. 7591-1, 10, 100**)
- Thrombin, Active, Bovine Plasma (High Activity) (**Cat. No. 7592-1, 10, 100**)
- Thrombin, Active, Human Plasma (**Cat. No. 7590-250, 1000**)

**FOR RESEARCH USE ONLY! Not to be used in humans.**