

Product datasheet

Mouse Prothrombin / Thrombin Total ELISA Kit  
ab157527

1 References 1 Image

Overview

**Product name** Mouse Prothrombin / Thrombin Total ELISA Kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
1	20	2.81ng/ml	0.267	9.51%
2	20	14.1ng/ml	0.56	3.98%
3	20	39.5ng/ml	1.4	3.53%

Inter-assay

Sample	n	Mean	SD	CV%
1	10	2.42ng/ml	0.241	9.96%
2	10	13.8ng/ml	1.2	8.72%
3	10	145ng/ml	7.18	4.95%

**Sample type** Serum, Plasma, Cell culture media

**Assay type** Sandwich (quantitative)

**Sensitivity** 0.52 ng/ml

**Range** 1 ng/ml - 500 ng/ml

**Recovery** 95.18 %

**Assay time** 1h 50m

**Assay duration** Multiple steps standard assay

**Species reactivity** **Reacts with:** Mouse

**Product overview** Abcam's Total Prothrombin/Thrombin ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for is for the quantitative determination of total Prothrombin and Thrombin in mouse

plasma, serum and cell culture media.

Mouse Prothrombin, Thrombin and thrombin-antithrombin complex will bind to the capture antibody coated on the microtiter plate. After appropriate washing steps, biotinylated primary antibody binds to the captured protein. Excess primary antibody is washed away and bound antibody is reacted with horseradish peroxidase conjugated streptavidin. TMB substrate is used for color development at 450nm. A standard calibration curve is prepared along with the samples to be measured using dilutions of Prothrombin. The amount of color development is directly proportional to the concentration of Prothrombin in the sample.

**Platform** Microplate

## Properties

**Storage instructions** Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Wash Buffer	1 x 50ml
5X Diluent	1 x 50ml
Anti-mouse Prothrombin primary antibody	1 vial
Anti-prothrombin coated Microtiter Plate (8 x 12 wells)	1 unit
HRP-conjugated Streptavidin	1 vial
Prothrombin Standard	1 vial
TMB Substrate Solution	1 x 10ml

**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.

**Tissue specificity** Expressed by the liver and secreted in plasma.

**Involvement in disease** Defects in F2 are the cause of factor II deficiency (FA2D) [MIM:613679]. It is a very rare blood coagulation disorder characterized by mucocutaneous bleeding symptoms. The severity of the bleeding manifestations correlates with blood factor II levels. Genetic variations in F2 may be a cause of susceptibility to ischemic stroke (ISCHSTR) [MIM:601367]; also known as cerebrovascular accident or cerebral infarction. A stroke is an acute neurologic event leading to death of neural tissue of the brain and resulting in loss of motor, sensory and/or cognitive function. Ischemic strokes, resulting from vascular occlusion, is considered to be a highly complex disease consisting of a group of heterogeneous disorders with multiple genetic and environmental risk factors. Defects in F2 are a cause of susceptibility to thrombosis (THR) [MIM:188050]. It is a multifactorial disorder of hemostasis characterized by abnormal platelet aggregation in response to various agents and recurrent thrombi formation. Note=A common genetic variation in the 3-prime untranslated region of the prothrombin gene is associated with elevated plasma prothrombin levels and an increased risk of venous thrombosis.

### Sequence similarities

Belongs to the peptidase S1 family.  
Contains 1 Gla (gamma-carboxy-glutamate) domain.  
Contains 2 kringle domains.  
Contains 1 peptidase S1 domain.

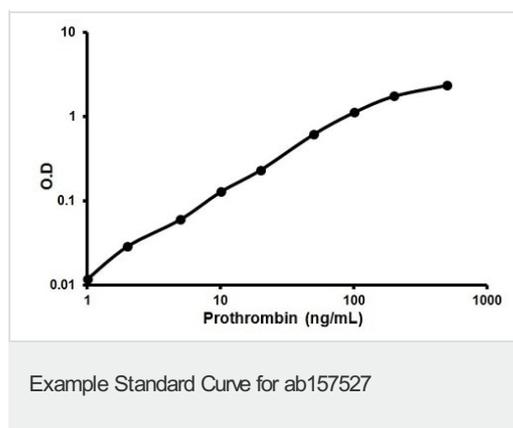
### Post-translational modifications

The gamma-carboxyglutamyl residues, which bind calcium ions, result from the carboxylation of glutamyl residues by a microsomal enzyme, the vitamin K-dependent carboxylase. The modified residues are necessary for the calcium-dependent interaction with a negatively charged phospholipid surface, which is essential for the conversion of prothrombin to thrombin.

### Cellular localization

Secreted > extracellular space.

## Images



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