abcam

Product datasheet

Thrombin activity assay ab234620

1 Abreviews 1 Image

Overview

Product name	Thrombin activity assay
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma, Tissue, Cell Lysate
Assay type	Quantitative
Sensitivity	0.034 AU/ml
Range	0.053 AU/ml - 0.495 AU/ml
Product overview	Thrombin Activity Assay Kit (ab234620) is developed to determine thrombin activity in human plasma, serum and cell culture samples. The amidolytic activity of thrombin is quantitated using a highly specific thrombin substrate releasing a pNA chromophore. The change in absorbance of the pNA at 405 nm is directly proportional to the thrombin enzymatic activity. **The entire kit may be stored at -20°C for long term storage before reconstitution - Avoid repeated freeze-thaw cycles.**
Notes	Thrombin (activated factor II [IIa]) is a coagulation protein that has many effects in the coagulation cascade. Thrombin is a serine protease (EC 3.4.21.5) that converts soluble fibrinogen into insoluble strands of fibrin, as well as catalyzing many other coagulation-related reactions. Thrombin is in the form of alpha-thrombin that is the immediate end product of prothrombin activation: two further thrombin products can be identified, beta- and gamma- thrombin. These are degraded forms that may arise from autodigestion of a thrombin preparation.
Platform	Microplate reader

Properties

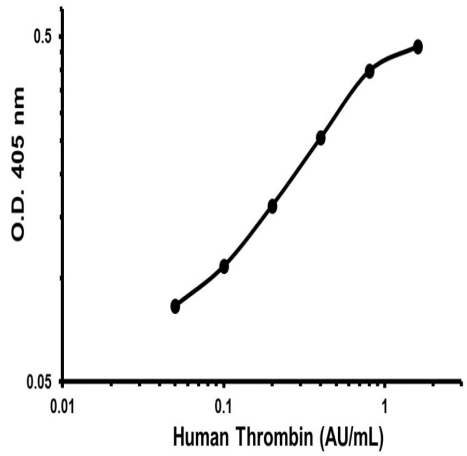
Storage instructions	Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
10X Diluent M Concentrate	1 x 20ml
Human Thrombin Standard	1 vial

Components	1 x 96 tests
Microplate	1 unit
Sealing Tapes	3 units
Thrombin Substrate	2 vials

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	Factor II deficiency Ischemic stroke Thrombophilia due to thrombin defect Pregnancy loss, recurrent, 2
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. N-glycosylated. N-glycan heterogeneity at Asn-121: Hex3HexNAc3 (minor), Hex4HexNAc3 (minor) and Hex5HexNAc4 (major). At Asn-143: Hex4HexNAc3 (minor) and Hex5HexNAc4 (major).
Cellular localization	Secreted, extracellular space.

Images



Human Thrombin Chromogenic Activity Standard Curve

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