Prothrombin (PT) ELISA Kit for Bovine

PRODUCT OVERVIEW

Product Name	Prothrombin (PT), ELISA Kit
Full Product Name	Bovine Prothrombin ELISA Kit
Product Gene Name	PT elisa kit
Species Reactivity	Bovine
Assay Type	Competitive
Samples	Serum, plasma, Cell Culture Supernatants, body fluid and tissue homogenate
Detection Range	0.5-10mg/mL
Sensitivity	0.1mg/mL
Preparation and Storage	Store all reagents at 2-8 degree C.
Molecular Weight	70,037 Da
OMIM	614390
Sample Preparation	We suggest pre-experimenting with neat (undiluted) samples, 1:2 or 1:4 dilutions. Please avoid diluting your samples more than 1:10 as it would exceed the dilution limit set for this kit. If the expected concentration of the target is beyond the detection range of the kit, please contact our technical support team
Product Categories/Family for PT elisa kit	Cardiovascular
ISO Certification	Manufactured in an ISO 13485:2016 Certified Laboratory.
Related Product Information for PT elisa kit	MBS734970 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Prothrombin (PT) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing PT. The ELISA analytical biochemical technique of the MBS734970 kit is based on PT antibody-PT antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect PT antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, PT. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).
Other Notes	Small volumes of PT elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PT. It may not necessarily be applicable to this product.

NCBI GI #	261695
NCBI GeneID	2147
NCBI Accession #	AAB24476.1
UniProt Secondary Accession #	Q4QZ40; Q53H04; Q53H06; Q69EZ7; Q7Z7P3; Q9UCA1; B2R7F7; B4E1A7
UniProt Related Accession #	P00734
NCBI Official Full Name	prothrombin, partial

NCBI Official Synonym Full Names	coagulation factor II (thrombin)
NCBI Official Symbol	F2
NCBI Official Synonym Symbols	PT; THPH1; RPRGL2
UniProt Protein Name	Prothrombin
UniProt Synonym Protein Names	Coagulation factor IICleaved into the following 4 chains:Activation peptide fragment 1; Activation peptide fragment 2; Thrombin light chain; Thrombin heavy chain
Protein Family	Prothrombin
UniProt Gene Name	F2
UniProt Entry Name	THRB_HUMAN
NCBI Protein Information	prothrombin; serine protease; prothrombin B-chain; prepro-coagulation factor II
NCBI Summary for PT	Coagulation factor II is proteolytically cleaved to form thrombin in the first step of the coagulation cascade which ultimately results in the stemming of blood loss. F2 also plays a role in maintaining vascular integrity during development and postnatal life. Mutations in F2 leads to various forms of thrombosis and dysprothrombinemia. [provided by RefSeq, Jul 2008]
UniProt Comments for PT	prothrombin: 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. Defects in F2 are the cause of factor II deficiency (FA2D). 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); 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 the cause of thrombophilia due to thrombin defect (THPH1). It is a multifactorial disorder of hemostasis characterized by abnormal platelet aggregation in response to various agents and recurrent thrombi formation. 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. Defects in F2 are associated with susceptibility to pregnancy loss, recurrent, type 2 (RPRGL2). A common complication of pregnancy, resulting in spontaneous abortion before the fetus has reached viability. The term includes all miscarriages from the time of conception until 24 weeks of gestation. Recurrent pregnancy loss is defined as 3 or more consecutive spontaneous abortions. Belongs to the peptidase S1 family. Protein type: Protease; EC 3.4.21.5; Apoptosis; Secreted, signal peptide; Secreted Chromosomal Location of Human Ortholog: 11p11 Cellular Component: extracellular space; Golgi lumen; endoplasmic reticulum lumen; plasma membrane; extracellular region Molecular Function: protein binding; growth factor activity; serine-type endopeptidase activity; calcium ion binding; receptor binding Biological Process: positive regulation of blood coagulation; multicellular organismal development; positive regulation of collagen biosynthetic process; proteolysis; regulation of cell shape; cell surface receptor linked signal transduction; negative regulation of fibrinolysis; positive regulation of cell proliferation; response to wounding; acute-phase response; negative regulation of proteolysis; platelet activation; cytosolic calcium ion homeostasis; post-translational protein modification; positive regulation of cell growth; peptidyl-glutamic acid carboxylation; positive regulation of phosphoinositide 3-kinase cascade; fibrinolysis; cellular protein metabolic process; regulation of gene expression; regulation of blood coagulation; negative regulation of astrocyte differentiation; positive regulation of protein amino acid phosphorylation; positive regulation of release of sequestered calcium ion into cytosol; blood coagulation; blood coagulation, intrinsic pathway; leukocyte migration Disease: Thrombophilia Due To Thrombin Defect; Stroke, Ischemic; Pregnancy Loss, Recurrent, Susceptibility To, 2; Prothrombin Deficiency, Congenital

Research Articles on PT	**1.** Age-dependent changes in thrombin generation parameters may suggest a regulation mechanism for the thrombin generation system over the first years of life.
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