

Active Native Bovine α -Thrombin

Cat. No. F2-274B Lot. No. (See product label)

SPECIFICATION

Product Overview

Species Bovine

Source Plasma

Description

Alpha-thrombin is a highly specific serine protease generated by proteolytic activation of the zymogen prothrombin. During coagulation, thrombin cleaves fibrinogen to form fibrin, leading to the ultimate step in coagulation, the formation of a fibrin clot.

Thrombin is also responsible for feedback activation of the procofactors factor V and factor VIII. Thrombin has also been reported to activate factor XIII and platelets, and also functions as a vasoconstrictor protein. The procoagulant activity of thrombin is arrested in two ways: 1) inhibition by either heparin cofactor II or the antithrombin III/heparin complex; or 2) complex formation with thrombomodulin. Formation of the thrombin/thrombomodulin complex results in the inability of thrombin to cleave fibrinogen and activate factors V and VIII, but increases the efficiency of thrombin for activation of the anticoagulant, protein C.

Form 50% glycerol/water (v/v)

Bio-activity Fibrinogen clotting or chromogenic assay

Molecular Mass 36700

Purity >95% by SDS-PAGE. NOT tissue/cell culture grade. Not tested for endotoxin.

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Characteristic	Extinction coefficient:19.5, Percent carbohydrate: approximately 5%, Structure: two subunits, approximately Mr=6,000 and 31,000
Storage	-20°C
GENE INFORMATION	
Gene Name	F2?coagulation factor II (thrombin) [?Bos taurus?(cattle)]
Official Symbol	F2
Synonyms	prothrombin; thrombin
Gene ID	280685
mRNA Refseq	NM_173877
Protein Refseq	NP_776302
UniProt ID	P00735
Chromosome Location	chromosome: 15
Pathway	Cell surface interactions at the vascular wall, organism-specific biosystem; Class A/1 (Rhodopsin-like receptors), organism-specific biosystem
Function	calcium ion binding; fibrinogen binding

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