

## Active Native Bovine $\alpha$ -Thrombin

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

### SPECIFICATION

<b>Species</b>	Bovine
<b>Source</b>	Plasma
<b>Description</b>	<p>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.</p> <p>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.</p>
<b>Form</b>	50% glycerol/water (v/v)
<b>Bio-activity</b>	Fibrinogen clotting or chromogenic assay
<b>Molecular Mass</b>	36700
<b>Purity</b>	>95% by SDS-PAGE. NOT tissue/cell culture grade. Not tested for endotoxin.
<b>Characteristic</b>	Extinction coefficient:19.5, Percent carbohydrate: approximately 5%, Structure: two

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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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