

Active Native Bovine Activated Protein C

Cat. No. PROC-272B **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Bovine

Source Plasma

ProteinLength 1-456 aa

Description

Activated protein C (APC) is an anticoagulant serine protease derived from the two chain, vitamin K-dependent zymogen, protein C. A complex between alpha-thrombin and thrombomodulin catalyzes a single cleavage at Arg-12 (Arg-14 in bovine) in the heavy chain of protein C, to generate activated Protein C. Several non-physiologically relevant proteases such as RVV-X activator, trypsin, and PROTAC are also capable of activating protein C. APC functions as an anticoagulant which catalyzes the proteolytic inactivation of the cofactors, factors Va and VIIIa, leading to inhibition of the prothrombinase and factor Xase complexes. The inactivation of factors Va and VIIIa is both Ca²⁺ and phospholipid dependent. The vitamin K dependent cofactor, protein S, moderately increases this rate of inactivation by forming a 1:1 complex with APC (K_d=6x10⁻⁹M).

Form 50% (vol/vol) glycerol/H₂O

Bio-activity Chromogenic assay

Molecular Mass 52650

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Purity	>95% by SDS-PAGE. NOT tissue/cell culture grade. Not tested for endotoxin.
Characteristic	Extinction coefficient:13.7, Isoelectric point:4.2-4.5, Percent carbohydrate:0.14, Structure:two chains, Mr=35,000 and 21,000, disulfide linked, NH2-terminal gla domain two EGF domains
Storage	-20°C
GENE INFORMATION	
Gene Name	PROC protein C (inactivator of coagulation factors Va and VIIIa) [Bos taurus]
Official Symbol	PROC
Synonyms	vitamin K-dependent protein C; autoprothrombin IIA; anticoagulant protein C; blood coagulation factor XIV
Gene ID	281428
mRNA Refseq	NM_001166512
Protein Refseq	NP_001159984
Chromosome Location	2q12
Pathway	Cell surface interactions at the vascular wall, organism-specific biosystem; Complement and Coagulation Cascades, organism-specific biosystem; Complement and coagulation cascades, conserved biosystem
Function	calcium ion binding; serine-type endopeptidase activity

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