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California Bioscience

Product Datasheet

Product Name Porcine Thrombin

Cata No CB501074

Source *Porcine Blood*

Synonyms

Description

Thrombin enzyme (Activated Factor IIa) is an important clotting promoter that controls the transformation of soluble fibrinogen to insoluble active fibrin strands. Thrombin is a coagulation protein and a serine protease (EC 3.4.21.5) that catalyzes many coagulation-related reactions. Thrombin triggers factor-XI, factor-V, Factor-XIII and factor-VIII. Thrombin endorses platelet activation, using activation of protease-activated receptors on the platelet. As a result of its high proteolytic specificity, thrombin has become an important biochemical protein. The thrombin cleavage site (Leu-Val-Pro-Arg-Gly-Ser) is widely used in linker regions of recombinant fusion protein constructs. After the purification of the fusion protein, thrombin is used to cleave between the Arginine and Glycine residues of the cleavage site, efficiently removing the purification tag from the protein of interest with a high degree of specificity.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Biological Activity

One unit is defined as the amount of enzyme needed to cleave 1 mg of fusion protein in 16 hours to 95% completion at 20°C in a buffer containing 25 mM Tris-HCl, pH 8.4, 150 mM NaCl, and 2.5 mM $CaCl_2$.

Formulation

Lyophilized Powder from 20mM PBS, pH 7.4 containing 0.9% NaCl.

Reconstitution

It is recommended to reconstitute the lyophilized Thrombin in sterile 18MΩ-cm H_2O.

Stability

Lyophilized Thrombin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IPF1 should be stored at 4°C between 2-7 days and for future use below -18°C.
For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
Please prevent freeze-thaw cycles.