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# DATA SHEET

Version: 03
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## 1. Identification

**Product name** **Bovine Factor Xa**
250 µg (1 mg/mL) Solution

**Cat. No** **P0260**

## 2. Description

**Factor Xa** is a serine endopeptidase that forms part of the prothrombinase complex, along with factor Va, in the common pathway in coagulation cascade. The prothrombinase complex increases the conversion rate of prothrombin to thrombin. Subsequently, thrombin catalyzes the conversion of fibrinogen to fibrin monomers which then polymerize for thrombus formation. One molecule of Factor Xa can generate >1000 thrombin molecules. Factor Xa cleaves after the arginine residue in its preferred cleavage site Ile-(Glu or Asp)-Gly-Arg and it will occasionally cleave at other basic residues. However, it will not cleave at a site followed by proline or arginine.

**Factor Xa is often used to remove fusion tags from expressed proteins.** A factor Xa sensitive site is incorporated between the recombinant protein of interest and peptides or proteins which facilitate purification and/or expression. The target protein is released from the expressed hybrid by cleavage with factor Xa. Factor Xa can then be easily removed by affinity chromatography.

## 3. Kits Components

| Item | Quantity | Concentration |
|---|---|---|
| **Bovine Factor Xa Solution** | 250 µg | 1mg/ml |

Specific Activity > 210 U/mg

## 4. Product Source

Factor Xa Protease is purified from bovine plasma and activated by treatment with the activating enzyme from Russell's viper venom. This RVV-X is removed after activation. Complete activation was observed on SDS-PAGE.

## 5. Storage specifications

Storage at -70 ˚C for long term storage. The enzyme is stable at –20 ˚C for one week. Avoid repeated freeze–thaw cycles.

## 6. Quality Control

Product is >/=95% pure upon visual inspection of SDSPAGE.

## 7. Factor Xa Protease Treatment

Typically, 1 mg of fusion protein can be incubated with 10 µg of factor Xa for 2.5 hours at 37 ˚C. Digestion time and enzyme-to-substrate ratio may require optimization for each specific application.

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## 8. Further information

**Product Use Limitations**

This product is developed, designed and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

**Disclaimer**

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