

# Data sheet

## Factor Xa Protease

Cat. No: P0260

Cat. No: P0261

### 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.

### 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.

### Quality Control

Product is >=95% pure upon visual inspection of SDS-PAGE.

### Kit Components

	P0260	P0261
Factor Xa ( 1 mg/ml)	250 µg	1 mg

Specific Activity > 210 U/mg

### Unit Definition

One unit of activated Factor X will liberate 1.0 µmole of p-nitroanilide from a synthetic Ile-Glu-Gly-Arg peptide with p-nitroanilide derivatized arginine as the substrate per minute at pH 8.3 at 37 °C.

### Storage

-70 °C

### Storage buffer

20 Mm Tris-HCl/ 0.7 M NaCl/ ph 7.4

### 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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## Notes

### PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively for research purposes and in vitro use only. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals. Please refer to [www.canvaxbiotech.com](http://www.canvaxbiotech.com) for Material Safety Data Sheet of the product.

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