

5-CHROM-22

Chromogenic Substrate for Factor Xa, 25 mg

Ref. 5D-30803

For Research Only. Not for Use in Diagnostic Procedures.
For *in vitro* Use Only.

Description:

A chromogenic substrate for Factor Xa

Formula:

Form 1 (50%): Bz-Ile-Glu-(yOCH₃)-Gly-Arg-pNA

Form 2 (50%): Bz-Ile-Glu-(yOH)-Gly-Arg-pNA

Molecular weight: Form 1: 711.8 D, Form 2: 697.7 D

Composition: Enzymatically digestible substrate

Purity, via RP-HPLC: ≥ 96%

Solubility:

6 mmol/L in H₂O, 2 mmol/L in Tris buffer (pH 8.3, I 0.25)

Assay Conditions:

Enzyme activity is determined by measuring the increase in absorbance of the free chromophore (pNA) generated per unit time at a wavelength of 405 nm. At excess substrate concentrations, the rate at which the absorbance increases due to the amount of chromophore released is linearly related to enzyme concentration. Measurement can be made either through acid quenching of the reaction (end-point method), or through use of a kinetic recording spectrophotometer (initial-rate-method).

Kinetic Data:

Factor Xa (bovine): $K_m=3 \cdot 10^{-4}$ mol/L, $k_{cat}=100$ sec⁻¹ in 37°C Tris buffer pH 8.3, I 0.25

Trypsin (porcine): $K_m=2 \cdot 10^{-5}$ mol/L, $k_{cat}=280$ sec⁻¹ in 37°C Tris buffer pH 9.0, I 0.25

Presentation:

Ref. 5D-30803 glass vial containing 25 mg (approx. 35 µmol/vial) of lyophilized, digestible substrate.

Storage and Stability:

Lyophilized substrate may be stored in the dark at 2°-8°C up to the expiration date stated on the vial. Protect from moisture by allowing vial to reach room temperature prior to opening.

Reconstituted substrate may be stored for 1 week at room temperature or 3 months at 2°-8°C. Do not freeze.

Warnings and Precautions:

Hazard Statements:

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation

Precautionary statements:

P261 Avoid breathing dust

P264 Wash thoroughly after handling

P280 Wear protective gloves/eye protection

P337 + P313 If eye irritation persists: Get medical advice/attention

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.