

S-2765™

For Laboratory Use Only

For General Laboratory Use

S-2765™

S-2765 is a chromogenic substrate for determination of Factor Xa. It is also very sensitive to trypsin.

COMPOSITION

Each vial contains the chromogenic substrate S-2765, 25 mg and mannitol 60 mg as a bulking agent.

PRECAUTIONS AND WARNINGS:

Hazard class: None

Hazard statements: None

Precautionary statements: None

Supplemental Hazard Information: Up to 2.9% of the mixture consists of component of unknown acute toxicity (oral, dermal, inhalation) for the human health and unknown hazard to the aquatic environment.

CHEMISTRY

Chemical name: N- α -Benzyloxycarbonyl-D-arginyl-L-glycyl-L-arginine-p-nitroaniline-dihydrochloride

Formula: N- α -Z-D-Arg-Gly-Arg-pNA · 2 HCl
Mol. wt: 714.6

$\epsilon_{316 \text{ nm}}$: $1.27 \cdot 10^4 \text{ mol}^{-1} \cdot \text{L} \cdot \text{cm}^{-1}$

Solubility: > 40 mmol/L in H₂O
> 10 mmol/L in Tris buffer (pH 8.3, I 0.25)

Stability: Lyophilized substance: stable at 2-8°C until expiry date printed on the label. The substance is hygroscopic and should be stored in a dry place.
Solution: 2 mmol/L in H₂O is stable for six months at 2 to 8°C
Contamination by microorganisms may cause hydrolysis.

Suitable stock solution: 1-2 mmol/L in H₂O.

PRINCIPLE**Enzyme**

N- α -Z-D-Arg-Gly-Arg-pNA $\xrightarrow{\text{Enzyme}}$ N- α -Z-D-Arg-Gly-Arg-OH+pNA

The method for the determination of activity is based on the difference in absorbance between the pNA formed and the original substrate. The rate of pNA formation, i.e. the increase in absorbance per second at 405 nm, is proportional to the enzymatic activity and is conveniently determined with a photometer.

CHROMOGENIX

KINETIC DATA

Factor Xa (bovine): $K_m = 1 \cdot 10^{-4}$ mol/L, $k_{cat}=290$ sec⁻¹
in Tris buffer pH 8.3, I 0.25 at
37°C.

Factor Xa: (human plasma activated with
Russel's Viper Venom):
 $k_m=3 \cdot 10^{-4}$ mol/L in Tris buffer pH
7.8, I 0.4 at 37°C.

STANDARDIZATION

An activity of $\Delta A/\text{min} = 0.05$ (37°C) is obtained by using
a substrate concentration of $2 \cdot k_m$ and a concentration
of 0.04 nkat/mL of FXa (Chromogenix AB).



CHROMOGENIX

S-2765

Printed Insert Sheet: 301921

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LANGUAGES

ENGLISH

TECHNICAL SPECS

PAPER: White paper,
50-60 g/m² weight.

SIZE: 4.1 x 5.9" (104 x 150 mm.).

PRINT: Front/Back.

PRINT COLOR: All type in black.