

**ENGLISH****S-2765™**For Laboratory Use Only**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.

**CHEMISTRY**

*Chemical name:* N- $\alpha$ -Benzyloxycarbonyl-D-arginyl-L-glycyl-L-arginine-p-nitroaniline-dihydrochloride

*Formula:* N- $\alpha$ -Z-D-Arg-Gly-Arg-pNA · 2HCl

*Mol. wt.:* 714.6

*$\epsilon_{316\text{ nm}}$*  1,27 · 10<sup>4</sup> mol<sup>-1</sup> · L · cm<sup>-1</sup>

*Solubility:* > 40 mmol/L in H<sub>2</sub>O  
> 10 mmol/L in Tris buffer (pH 8.3, I 0.25)

*Stability:* Lyophilized substance: stable at 25°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 H<sub>2</sub>O is stable for six months at 2 to 8°C  
Contamination by micro-organisms may cause hydrolysis.

*Suitable stock solution:* 1-2 mmol/L in H<sub>2</sub>O.

**PRINCIPLE**

Enzyme  
N- $\alpha$ -Z-D-Arg-Gly-Arg-pNA  $\xrightarrow{\hspace{1cm}}$  N- $\alpha$ -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.

**KINETIC DATA**

*Factor Xa (bovine):*  $k_m=1 \cdot 10^{-4}$  mol/L,  $k_{cat}=290$  sec<sup>-1</sup> 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  $k_m$  and a concentration of 0.04 nkat/mL of FXa (Chromogenix AB).

**DEUTSCH****S-2765™**Nur für Laborzwecke

S-2765 ist ein chromogenes Substrat zur Bestimmung von Faktor Xa. Es ist außerdem sehr empfindlich für Trypsin.

**ZUSAMMENSETZUNG**

Jedes Fläschchen enthält 25 mg chromogenes Substrat S-2765 und 60 mg Mannitol als Füllstoff

**CHEMIE**

*Chemischer Name:* N- $\alpha$ -Benzyloxycarbonyl-D-arginyl-L-glycyl-L-arginin-p-nitroanilid-dihydrochlorid

*Formel:* N- $\alpha$ -Z-D-Arg-Gly-Arg-pNA · 2HCl

*Molekulargewicht:* 714,6


*$\epsilon_{316\text{ nm}}$*  1,27 · 10<sup>4</sup> mol<sup>-1</sup> · L · cm<sup>-1</sup>

*Löslichkeit:* > 40 mmol/l in H<sub>2</sub>O  
> 10 mmol/l in Trispuffer (pH 8,3, I 0,25)

*Stabilität:* Lyophilisierte Substanz: Haltbarkeit bei 25°C bis zum auf dem Etikett aufgedruckten Verfallsdatum. Die Substanz ist hygroscopisch und sollte trocken gelagert werden.  
Lösung: 2 mmol/l in H<sub>2</sub>O sind 6 Monate zwischen 2-8°C haltbar.  
Kontamination durch Mikroorganismen kann zur Hydrolyse führen.

*Geeignete*

*Ausgangslösung:* 1-2 mmol/l in H<sub>2</sub>O

**CHROMOGENIX™**

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