

S-2403™

For Laboratory Use Only

For General Laboratory Use

S-2403™**CHROMOGENIX**

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S-2403 is a chromogenic substrate for plasmin and streptokinase-activated plasminogen.

COMPOSITION

Each vial contains the chromogenic substrate S-2403 25 mg and mannitol 60 mg as a bulking agent.

CHEMISTRY

Chemical name: L-Pyroglutamyl-L-Phenylalanyl-L-Lysine-p-Nitroaniline hydrochloride.

Formula: <Glu-Phe-Lys-pNA · HCl

Mol. wt: 561.0

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

Solubility: >40 mmol/L in H₂O

Stability: Substance: Stable until expiry date if stored at 2-8°C.

Avoid exposure to light.

The substance is hygroscopic and should be stored dry.

Solution: 7.5 mmol/L in H₂O is stable for at least 6 months at 2 to 8°C.

Contamination by microorganisms may cause hydrolysis.

Suitable stock solution:

3-8 mmol/L in H₂O.

PRINCIPLE

<Glu-Phe-Lys-pNA $\xrightarrow{\text{Enzyme}}$ <Glu-Phe-Lys-OH+pNA

The method for the determination of activity is based on the difference in absorbance (optical density) 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

Plasmin (human): $K_m=2.9 \cdot 10^{-4} \text{ mol/L}$, $k_{\text{cat}}=92 \text{ s}^{-1}$.

Plasminogen-SK: $K_m=3.0 \cdot 10^{-4} \text{ mol/L}$, $k_{\text{cat}}=43 \text{ s}^{-1}$.
Determined at 37°C in Tris buffer pH 7.4, I 0.15.

SELECTIVITY

The substrate is insensitive to plasma-kallikrein, thrombin and FXa.

STANDARDIZATION

An activity of $\Delta A/\text{min} = 0.30$ (37°C) is obtained by using a substrate concentration of 0.4 mmol/L and:

1. $7.8 \cdot 10^{-9} \text{ mol/L}$ of human plasmin from Chromogenix.
2. $1.2 \cdot 10^{-8} \text{ mol/L}$ of SK-activated human plasminogen from Chromogenix.



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