

S-2266™

For Laboratory Use Only

For General Laboratory Use

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S-2266 is a chromogenic substrate for glandular kallikrein.

COMPOSITION

Each vial contains chromogenic substrate S-2266 25 mg and mannitol 60 mg added as a bulking agent.

CHEMISTRY

Chemical name: H-D-Valyl-L-leucyl-L-arginine-p-Nitroaniline dihydrochloride

Formula: H-D-Val-Leu-Arg-pNA · 2HCl

Mol. wt: 579.6

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

Solubility: > 40 mmol/l in H₂O

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: 2 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: 2 mmol/l in H₂O

PRINCIPLE

H-D-Val-Leu-Arg-pNA $\xrightarrow{\text{Enzyme}}$ H-D-Val-Leu-Arg-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.

CHROMOGENIX

KINETIC DATA

Porcine pancreas

kallikrein: $K_m=2.2 \cdot 10^{-5}$ mol/l,
 $V=8 \cdot 10^{-9}$ mol/min · KU

Human urine

kallikrein: $K_m=3 \cdot 10^{-5}$ mol/l

Human saliva

kallikrein: $K_m=5 \cdot 10^{-4}$ mol/l. Determined at
37°C in 2.5 ml of 0.05 mol/l
Tris buffer pH 9.0, I 0.05.

STANDARDIZATION

An activity of $\Delta A/\text{min}=0.05$ (37°C) is obtained by using 0.1 mmol/l of the substrate and 0.6 KU/ml of porcine pancreas kallikrein, KZC (Bayer, Leverkusen, Germany).

APPLICATIONS

The substrate has been used for the determination of:

1. Kallikrein activity in purified preparations (1,2,3).
2. Kallikrein in urine (3,4).
3. Kallikrein in saliva (3,5,6).



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CHROMOGENIX