ENGLISH

S-2288™

For Laboratory Use Only For General Laboratory Use

S-2288 is a chromogenic substrate sensitive to a broad spectrum of serine proteases.

### COMPOSITION

Each vial contains chromogenic substrate S-2288, 25 mg and mannitol 40 mg as a bulking agent.

#### CHEMISTRY

OTLIMISTIC	
Chemical name:	H-D-Isoleucyl-L-prolyl-L-arginine-p- nitroaniline dihydrochloride.
Formula:	H-D-Ile-Pro-Arg-pNA · 2HCl
Mol. wt:	577.6
Е <sub>316 пт</sub> :	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
Stability:	Substance: Stable until expiry date if stored at 2-8°C. Avoid exposure to light. The substance is hygroscopic and should be stored in a dry place. Solution: 10 mmol/L in H <sub>2</sub> O is stable for more than two months at 2-8°C. Contamination by micro- organisms may cause hydrolysis.
Suitable	

stock solution: 10 mmol/L in H2O

#### KINETIC DATA

The following kinetic constants were estimated at  $37^{\circ}$ C in Tris buffer pH 8.4, I 0.15.

Enzyme	K <sub>m</sub> (mol/L)	V <sub>max</sub> ( mol/min ( and unit )	k <sub>cat</sub> (sec <sup>-1</sup> )
Thrombin	3 · 10 <sup>-6</sup>	10 · 10 <sup>-8</sup>	118
Urokinase	2 · 10 <sup>-4</sup>	2 · 10 <sup>-10</sup>	16
Factor XII f	4 · 10 <sup>-4</sup>	5 · 10 <sup>-5</sup>	23
t-PA <sup>1)</sup> one-chain	1 · 10 <sup>-3</sup>	10 · 10 <sup>-11</sup>	26
t-PA1) two-chain	3 · 10-4	11 · 10 <sup>-11</sup>	28
Plasma kallikrein	1 · 10 <sup>-3</sup>	13 · 10 <sup>-7</sup>	-
Plasmin	9 · 10 <sup>-3</sup>	5 · 10 <sup>-6</sup>	181
Factor Xa	2 · 10 <sup>-3</sup>	9 · 10 <sup>-8</sup>	110
C <sub>is</sub>	3 · 10 <sup>-3</sup>	3 · 10 <sup>-6</sup>	4
Cir	6 · 10-4	1 · 10 <sup>-6</sup>	2

<sup>1)</sup> Tissue plasminogen activator (porcine)





**CHROMOGENI**>

Instrumentation Laboratory Company - Bedford, MA 01730-2443 (USA)

Instrumentation Laboratory SpA-V.le Monza 338-20128 Milano (Italy) 301959R2

Thrombin (human) Ortho Urokinase Leo Factor XIIf* Mol wt 28 000		= 1.4 · 10 <sup>-2</sup> nmol = 1.8 · 10 <sup>-4</sup> nmol = 36 nmol
t-PA (one- and two-chain) Mol wt 64 000	1 IU	= 6.3 · 10 <sup>-5</sup> nmol(1)
Plasma kallikrein	U	= µmol/min
Plasmin (human)Chromogenix	1 CU	= 0.45 nmol
Factor Xa (bovine) Diagen	1 U (Denso	n)= 1.4 · 10 <sup>-2</sup> nmol
$\rm C_{is}^{*}$ and $\rm C_{ir}^{*}$ MoI wt 85 000	1 mg	= 12 nmol

\*The enzyme is assumed to be pure

#### STANDARDIZATION

With a substrate concentration of  $1 \cdot 10^{-3}$  mol/L and an enzyme concentration of  $4 \cdot 10^{-9}$  mol/L the following activities are obtained.

Enzyme	∆A/min	Enzyme	∆A/min	Enzyme	$\Delta A/min$
Urokinase	0.031	Plasmin t-PA (one-chain) t-PA (two-chain)	0.030	Cie	0.084 0.002 0.003

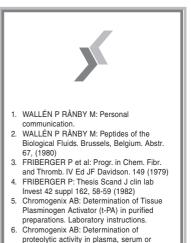
The tissue plasminogen activator is not affected by the following inhibitors used at the concentrations given.

1. Trasylol 30 KIU/mL.

- 2. Soybean trypsin inhibitor 50 µg/mL.
- 3. Antithrombin 0.1 PEU/mL and heparin 3 IU/mL.

#### APPLICATIONS

The substrate has been used for the determination of Tissue plasminogen activator in purified preparations (2,3,4)



Euglobulin fractions. Laboratory instructions.

**CHROMOGENIX** 

## S-2288

Printed Insert Sheet:	301959
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## LANGUAGES

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# TECHNICAL SPEC'S

PAPER:	White paper,
	50-60 g/m <sup>2</sup> weight.
SIZE:	4.1 x 5.9" (104 x 150 mm.).
PRINT:	Front/Back.
PRINT COLOR:	All type in black.