

PENTAPHARM

Pefachrome® tPA

Application: Highly sensitive chromogenic peptide substrate for tissue-type plasminogen activator (tPA). Determination of tPA activity for research, in-process and quality control. Pefachrome® tPA shows different sensitivity to native single-chain tPA (sc-tPA) and its fully active two-chain form (tc-tPA). This allows a differential determination of each molecular form.

Formula: CH₃SO₂-D-CHA-Gly-Arg-pNA-AcOH

Principle: CH₃SO₂-D-CHA-Gly-Arg-pNA + E => CH₃SO₂-D-CHA-Gly-Arg-OH + pNA + E
E = Enzyme (tc-tPA or sc-tPA)

MW: 658.9

Kinetic data:

	K _M	V _{max}
sc-tPA	0.286 mM	6.95 nmol/μg tPA/min
tc-tPA	0.167 mM	33.9 nmol/μg tPA/min

Storage: May be used by the expiry date given on the label when stored unopened, protected from moisture, in the dark, 2-8°C. Avoid contamination of the reagents by micro-organisms. Shipment of product does not require cooling during the time of transportation.

Material required but not provided:

Buffer, reference material

Buffer: 50 mM Tris-Imidazole buffer pH 8.4, 300 mM NaCl, 37 °C

Assay: Suggested protocol for the determination of native single-chain tPA (sc-tPA):

1.780 ml buffer 0.020 ml Enzyme (approx. 75'000 IU /ml) 0.200 ml Pefachrome®tPA (2 mM in water) => Determination of ΔOD/min at 405 nm
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Suggested protocol for the determination of two-chain tPA (tc-tPA):

1.750 ml buffer 0.050 ml Enzyme (approx. 120'000 IU /ml) 0.200 ml Pefachrome®tPA (4 mM in water) => Determination of ΔOD/min at 405 nm

Reference: Klufft C, ed.
Tissue type Plasminogen Activator (tPA): Physiological and Clinical Aspects.
Boca Raton: CRC Press; 1988: Vol.I 123-144, Vol.II 211-224

Package size: Bulk [g]

Code: 091-01

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