

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-HHT-Gly-Arg-pNA-AcOH

Principle: CH₃SO₂-D-HHT-Gly-Arg-pNA + E => CH₃SO₂-D-HHT-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

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 and II.

Package size: Vial containing 10 μmol
Bulk [g]

Code: 091-20
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