

# Pefachrome® tPA (Pefa-5937)

**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:** CH<sub>3</sub>SO<sub>2</sub>-D-HHT-Gly-Arg-pNA·AcOH

**Principle:** CH<sub>3</sub>SO<sub>2</sub>-D-HHT-Gly-Arg-pNA + E => CH<sub>3</sub>SO<sub>2</sub>-D-HHT-Gly-Arg-OH + pNA + E  
E = Enzyme (tc-tPA or sc-tPA)

**MW:** 658.9

**Kinetic data:**

	K <sub>M</sub>	V <sub>max</sub>
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:** Kluft 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  
091-01

FOR RESEARCH USE ONLY. NOT FOR HUMAN USE OR DRUG USE.

