

# Pefachrome® TH 8198 (corresp. S-2238)

<b>Application:</b>	Chromogenic peptide substrate for the determination of thrombin and antithrombin III		
<b>Formula:</b>	H-D-Phe-Pip-Arg-pNA · 2HCl		
<b>Principle:</b>	H-D-Phe-Pip-Arg-pNA + E ==> H-D-Phe-Pip-Arg-OH + pNA + E E = Enzyme		
<b>K<sub>M</sub>:</b>	7 µM (human thrombin)	<b>V</b> = 1.7 · 10 <sup>-7</sup> mol/min · NIH-U	
<b>K<sub>M</sub>:</b>	9 µM (bovine thrombin)	<b>V</b> = 2.2 · 10 <sup>-7</sup> mol/min · NIH-U	
<b>Solubility:</b>	> 10 mM in H <sub>2</sub> O	<b>MW:</b>	625.6
<b>Storage:</b>	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, α-thrombin (3 NIH units/ml in 300 mM NaCl)

**Buffer:** 50 mM Tris-Imidazole pH 8.4, 300 mM NaCl

**Assay 1:** Suggested protocol for the determination of **thrombin** activity:

1  0.730 ml buffer 0.070 ml α-thrombin 0.200 ml Pefachrome®TH 8198, 4 mM in dist.H <sub>2</sub> O => Determination of ΔOD/min at 405 nm
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**Assay 2:** Suggested protocol for the determination of **antithrombin III** in citrated plasma:

Inactivation of thrombin by plasma AT III 1.000 ml 4 NIH unit/ml thrombin and 10 USP unit/ml heparin / ml buffer 0.010 ml human citrated plasma => incubate for 4 min at 37° C
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Assay of residual thrombin activity 1.700 ml buffer 0.100 ml solution step 1 0.200 ml Pefachrome®TH 8198, 2 mM in dist.H <sub>2</sub> O => Determination of ΔOD/2 min at 405 nm
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**Package size:** Vial containing 25mg Pefachrome® TH 8198 and 120 mg mannitol

**Code:** 081-66

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