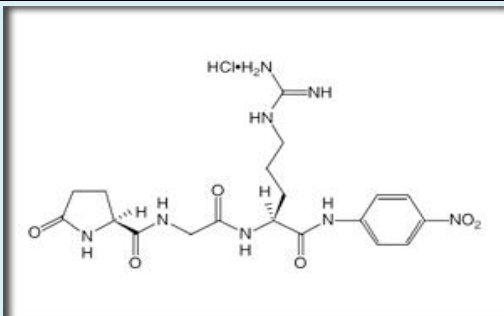
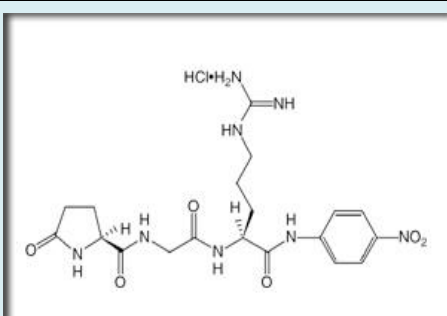


**COMPARISON OF CHARACTERISTICS AND PERFORMANCES OF  
UROKINASE (uPA) CHROMOGENIC SUBSTRATE  
(HYPHEN BioMed CS-61(44))**

	<b>HYPHEN BioMed</b>	<b>Chromogenix</b>												
Product name	<b>BIOPHEN CS-61(44)</b>	<b>S2444</b>												
Product reference	A229061	82 03 57												
Specificity	Recommended substrate for Urokinase	Chromogenic substrate for urokinase												
Peptide sequence	PyroGlu–Gly-Arg-pNa-HCl	pyroGlu-Gly-Arg-pNAHCl												
Developed name	L-Pyroglutamyl-glycyl-L-arginine-p-Nitroaniline hydrochloride.	L-Pyroglutamyl-glycyl-L-arginine-p-Nitroaniline hydrochloride.												
Chemical structure	 <p><chem>C19H26N8O6</chem>, HCl</p>													
Proposed presentation	25 mg	25 mg												
Molarity	~ 54 µM	-												
Bulking agents	Mannitol	Mannitol (40 mg/vial)												
Purity grade	> 95%	-												
Solubility	>10 mmol/L in H <sub>2</sub> O	>10 mmol/L in H <sub>2</sub> O												
Molecular weight	462.5 Da (basic structure)	498.9 Da* (*HCl included)												
Free pNA content	< 0.05%	NA												
E316 nm:	NA	$1.27 \cdot 10^4 \text{ mol}^{-1} \cdot \text{L} \cdot \text{cm}^{-1}$												
Respective reactivities	<table border="1"> <thead> <tr> <th>APC</th> <th>FXa</th> <th>Plasmin</th> <th>Kallicrein</th> <th>Thrombin</th> <th>Urokinase</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>1</td> <td>2</td> <td>&lt;1</td> <td>100</td> </tr> </tbody> </table> <p>Assay conditions must be established for making the substrate totally specific for Urokinase</p>	APC	FXa	Plasmin	Kallicrein	Thrombin	Urokinase	1	2	1	2	<1	100	-
APC	FXa	Plasmin	Kallicrein	Thrombin	Urokinase									
1	2	1	2	<1	100									
Stability of the lyophilized product	Until the expiration date printed on the vial. (48 months at 2-8 °C from the manufacturing date)	Stable until expiry date if stored at 2-8°C. Avoid exposure to light. The substance is hygroscopic and should be stored dry.												
Stability of the reconstituted product	<ul style="list-style-type: none"> <li>- 7 days at room temperature (18-25 °C)</li> <li>- 3 months at 2-8 °C</li> <li>- <b>Do not freeze.</b></li> </ul>	2 mmol/L in H <sub>2</sub> O is stable for at least 6 months at 2 to 8°C.												
Suitable stock solution	According to the research protocol used, the BIOPHEN CS-61(44) chromogenic substrate can be restored with variable volumes of distilled water; for example 5 mL can be used for a substrate concentration of 5 mg/mL, or 20 mL for a substrate concentration of 1.25 mg/mL	2-3 mmol/L in H <sub>2</sub> O.												

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Kinetic data	Same characteristics	Urokinase: Ploug U Km=9 . 10 <sup>-5</sup> mol/L, V=3.1 . 10 <sup>-10</sup> mol/min CTA U Km=6 . 10 <sup>-5</sup> mol/L, V=1.3 . 10 <sup>-10</sup> mol/min Determined at 37°C in 2.5 mL of 0.05 mol/L Tris buffer pH 8.8, I 0.05.																
Applications	<p>For in vitro use only. All research studies and protocols where a source of chromogenic substrate for Urokinase is required.</p> <p>Suggested protocol:</p> <table border="1" data-bbox="387 931 979 1339"> <tr> <td>Reagent</td> <td>Water bath</td> </tr> <tr> <td>uPA substrate (at 1mg/ml)</td> <td>100 µL</td> </tr> <tr> <td>Tris 0.05M , NaCl 0.05M pH 8.80 buffer</td> <td>600 µL</td> </tr> <tr> <td colspan="2">Mix and incubate for 2 min at 37°C</td> </tr> <tr> <td>uPA at 5000 U/ml</td> <td>100µl</td> </tr> <tr> <td colspan="2">Mix and incubate for 3 min at 37°C</td> </tr> <tr> <td>Citric acid 2%</td> <td>400µl</td> </tr> <tr> <td colspan="2">Read A405nm against the sample blank.</td> </tr> </table>	Reagent	Water bath	uPA substrate (at 1mg/ml)	100 µL	Tris 0.05M , NaCl 0.05M pH 8.80 buffer	600 µL	Mix and incubate for 2 min at 37°C		uPA at 5000 U/ml	100µl	Mix and incubate for 3 min at 37°C		Citric acid 2%	400µl	Read A405nm against the sample blank.		
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