

ATA-Phe-Pro-Arg-CMK

Catalog No.	CSI20054A	Quantity:	100 µg
	CSI20054B		1.0 mg

Description: ATA-Phe-Pro-Arg-CMK

Source: Chemical

Formulation: Frozen liquid

Purity: >95% by HPLC analysis

Endotoxin Level: < 0.1 ng/µg of protein

Storage & Stability: Store at -80°C. Stable for 3 years from delivery. **Avoid repeated freeze-thaw cycles.**

Background: ATA-FFRCK (Na-[(acetylthio) acetyl]-D-Phe-Phe-Arg-CH₂Cl) and ATA-FPRCK (Na-[(acetylthio)acetyl]-D-Phe-Pro-Arg-CHCl₂) are active-site specific labeling reagents for serine proteases. They are derived from irreversible peptide chloromethyl ketones and facilitate incorporation of a thioester moiety via alkylation of the catalytic site histidine residue. Liberation of the free thiol group is accomplished by gentle treatment with hydroxylamine (NwaterH) following irreversible incorporation into the enzyme catalytic site. The free thiol then becomes a site for specific modifications with thiol-reactive probes such as iodoacetamide fluorescent probes. Many serine proteases in which free thiols are lacking may be specifically labeled at the active site by these reagents. Both ATA-FPRCK and ATA-FFRCK have been used to label thrombin with 5-(iodoacetamido) fluorescein (5-IAF). The probe was then effectively utilized to follow conformational changes in the catalytic domain of alpha-thrombin upon binding to the fragment 2 domain of prothrombin. In addition, quantitative equilibrium binding studies and investigations into the kinetics underlying the non-proteolytic activation of the zymogen plasminogen by streptokinase were characterized with 2-((4'-iodoacetamido) anilino) naphthalene-6-sulfonic acid (IAANS) labeled plasminogen by using the ATA-FFRCK reagent.

References:

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