

ATA-Phe-Phe-Arg-CMK

Catalog No.	CSI20053A CSI20053B	Quantity:	100 µg 1.0 mg
Description:	Peptide used as an active-site specific labeling reagent for serine proteases.		
Concentration:	1.0 mg/ml		
Source:	Chemical		
Molecular Weight:	501 Da		
Formulation:	Frozen liquid in 1 mM HCl solution.		
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 derivatized 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 (NH₂OH) 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.

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

