

Product Information

N-Acetyl-Ala-Lys-Lys 4-Methoxy-2-naphthylamide

Product Number **C 7608**

Storage Temperature –20 °C

Product Description

Molecular formula: C₂₈H₄₂N₆O₅

Mol. wt.: 542.7

N-Acetyl-Ala-Lys-Lys 4-methoxy-2-naphthylamide (Ac-
AKK-MNA) is a fluorogenic substrate suitable for the
assay of plasmin.^{1,2}

When Ac-AKK-MNA is hydrolyzed, the free MNA
produced in the reaction can be quantified by
fluorometric detection (excitation 340 nm, emission
425 nm). MNA can also be detected by colorimetric
procedures because it couples with azo compounds to
give a red color product (525 nm).³ MNA also couples
with 5-nitrosalicylaldehyde to give a yellow to orange
fluorescent product for acid proteases.^{3,4}

Plasmin is a serine proteinase involved in fibrinolysis
with a preference for Lys in the P1 position. It cleaves
Ac-AKK-MNA at the lysyl-MNA bond, but not the lysyl-
lysyl bond. This peptide is poorly hydrolyzed by
urokinase, α-thrombin, Factor Xa, Factor IXa, Factor
Xia, and Factor XIIa. Streptokinase-activated human
plasmin will not hydrolyse Ac-AKK-MNA.¹

Preparation Instructions

Prepare 10mM stock solutions in DMF.

Storage/Stability

Store product at –20 °C. Material stable for at least one
year, if stored as recommended.

Store stock solutions in frozen aliquots at –20 °C.

Allow the material to warm to room temperature before
use to ensure stability.

References

1. Kato, H., et.al., New fluorogenic peptide substrates
for plasmin. *J. Biochem. (Tokyo)*, **88**, 183-190
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2. Piezchala, P. A., et.al., A new fluorogenic substrate
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3. Smith, R. E., et al., The evolution of proteinase
substrates with special reference to
dipeptidylpeptidase IV. *Histochem. J.*, **24**, 637-47
(1992).
4. Arnold, W. H., Comparative studies on the
localization of esteroproteases and kallikrein-like
activity in primate organs. *Histochem. J.*, **16**,
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