

PRODUCT INFORMATION



MeOSuc-Ala-Ala-Pro-Val-AMC

Item No. 14907

CAS Registry No.: 72252-90-5
Formal Name: N-(4-methoxy-1,4-dioxobutyl)-L-alanyl-L-alanyl-L-prolyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)-L-valinamide
Synonyms: I 1270, MeOSuc-AAPV-AMC, Methoxy Succinyl-Ala-Ala-Pro-Val-AMC

MF: C₃₁H₄₁N₅O₉

FW: 627.7

Purity: ≥98%

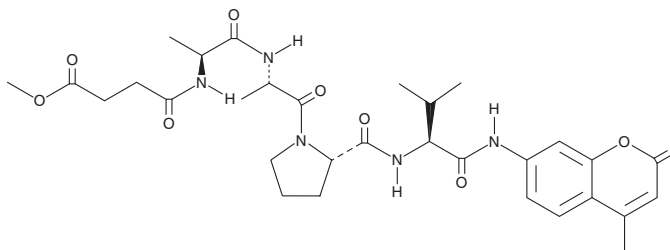
UV/Vis.: λ_{max}: 329 nm

Ex./Em. Max: 335-380/440-460 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MeOSuc-Ala-Ala-Pro-Val-AMC (MeOSuc-AAPV-AMC) is supplied as a crystalline solid. A stock solution may be made by dissolving the MeOSuc-AAPV-AMC in the solvent of choice, which should be purged with an inert gas. MeOSuc-AAPV-AMC is soluble in organic solvents such as DMSO, and dimethyl formamide (DMF). The solubility of MeOSuc-AAPV-AMC in these solvents is approximately 16 and 20 mg/ml, respectively.

MeOSuc-AAPV-AMC is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MeOSuc-AAPV-AMC should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MeOSuc-AAPV-AMC has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MeOSuc-Ala-Ala-Pro-Val-AMC (MeOSuc-AAPV-AMC) is a fluorogenic substrate for human leukocyte and porcine pancreatic elastase. The methoxy succinyl (MeO-Suc) peptide AAPV is avidly hydrolyzed by these elastases but not by cathepsin G.^{1,2} The addition of 7-amino-4-methylcoumarin (AMC) generates a peptide of low fluorescence (excitation: 355-380 nm; emission 440-460 nm) that demonstrates a linear increase in fluorescence in the presence of elastase.³ This peptidyl-AMC substrate detects as little as 11 pM human leukocyte elastase and 18 pM porcine pancreatic elastase.³

References

1. Powers, J.C., Gupton, B.F., Harley, A.D., *et al.* Specificity of porcine pancreatic elastase, human leukocyte elastase and cathepsin G. Inhibition with peptide chloromethyl ketones. *Biochim. Biophys. Acta.* **485(1)**, 156-166 (1977).
2. Nakajima, K. and Powers, J.C. Mapping the extended substrate binding site of cathepsin G and human leukocyte elastase. *J. Biol. Chem.* **254(10)**, 4027-4032 (1979).
3. Castillo, M.J., Nakajima, K., Zimmerman, M., *et al.* Sensitive substrates for human leukocyte and porcine pancreatic elastase: A study of the merits of various chromophoric and fluorogenic leaving groups in assays for serine proteases. *Anal. Biochem.* **99(1)**, 53-64 (1979).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/16/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM