

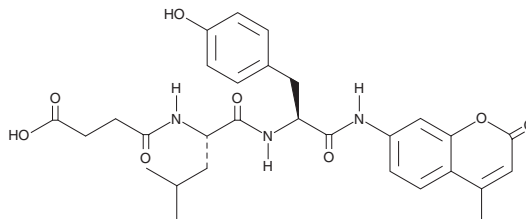
PRODUCT INFORMATION



Suc-Leu-Tyr-AMC

Item No. 10008120

CAS Registry No.: 94367-20-1
Formal Name: N-(3-carboxy-1-oxopropyl)-L-leucyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)-L-tyrosinamide
Synonym: Suc-LY-AMC
MF: C₂₉H₃₃N₃O₈
FW: 551.6
Purity: ≥98%
UV/Vis.: λ_{max}: 328 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

Suc-Leu-Tyr-AMC is supplied as a crystalline solid. A stock solution may be made by dissolving the Suc-Leu-Tyr-AMC in the solvent of choice, which should be purged with an inert gas. Suc-Leu-Tyr-AMC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of Suc-Leu-Tyr-AMC in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

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

Description

The calpains are a family of calcium-dependent cysteine proteases, with calpain I (μ-calpain) requiring micromolar calcium and calpain II (m-calpain) requiring millimolar calcium. Suc-Leu-Tyr-AMC is a fluorescent substrate for calpain I and II and papain (another cysteine protease) that is used for measuring the chymotrypsin-like peptidase activity of the 20S proteasome (excitation max: 360 nm; emission max: 460 nm).¹⁻³ Suc-Leu-Tyr-AMC can also be cleaved by the Ti protease from *E. coli*.⁴

References

1. Seol, J.H., Park, S.C., Ha, D.B., *et al.* Na⁺, K⁺-specific inhibition of protein and peptide hydrolyses by proteasomes from human hepatoma tissues. *FEBS Lett.* **247(2)**, 197-200 (1989).
2. Sasaki, T., Kikuchi, T., Yumoto, N., *et al.* Comparative specificity and kinetic studies on porcine calpain I and calpain II with naturally occurring peptides and synthetic fluorogenic substrates. *J. Biol. Chem.* **259(20)**, 12489-12494 (1984).
3. Edelstein, C.L., Wieder, E.D., Yaqoob, M.M., *et al.* The role of cysteine proteases in hypoxia-induced rat renal proximal tubular injury. *Proc. Natl. Acad. Sci. USA* **92**, 7662-7666 (1995).
4. Woo, K.M., Chung, W.J., Ha, D.B., *et al.* Protease Ti from escherichia coli requires ATP hydrolysis for protein breakdown but not for hydrolysis of small peptides. *J. Biol. Chem.* **264(4)**, 2088-2091 (1989).

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.

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