

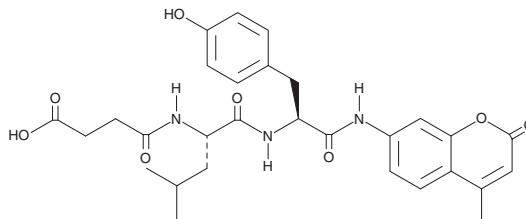
# PRODUCT INFORMATION



## 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:** C<sub>29</sub>H<sub>33</sub>N<sub>3</sub>O<sub>8</sub>  
**FW:** 551.6  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 328 nm



### Laboratory Procedures

For long term storage, we suggest that Suc-Leu-Tyr-AMC be stored as supplied at -20°C. It should be stable for at least two years.

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. Suc-Leu-Tyr-AMC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. 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).<sup>1-3</sup> Suc-Leu-Tyr-AMC can also be cleaved by the Ti protease from *E. coli*.<sup>4</sup>

### References

1. Seol, J.H., Park, S.C., Ha, D.B., *et al.* Na<sup>+</sup>, K<sup>+</sup>-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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