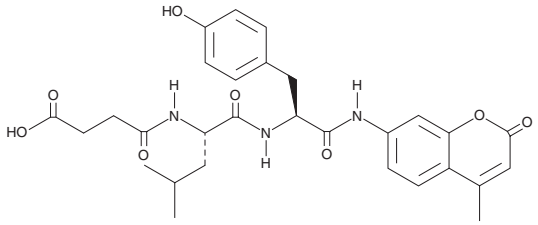
PRODUCT INFORMATION

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:	$C_{29}H_{33}N_3O_8$
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).

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