

PRODUCT INFORMATION



Boc-LRR-AMC

Item No. 26642

CAS Registry No.: 109358-46-5

Formal Name: N-[(1,1-dimethylethoxy)carbonyl]-L-leucyl-L-arginyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)-L-argininamide

Synonyms: Boc-Leu-Arg-Arg-AMC, Boc-Leu-Arg-Arg-7-amido-4-Methylcoumarin

MF: $C_{33}H_{52}N_{10}O_7$

FW: 700.8

Purity: $\geq 98\%$

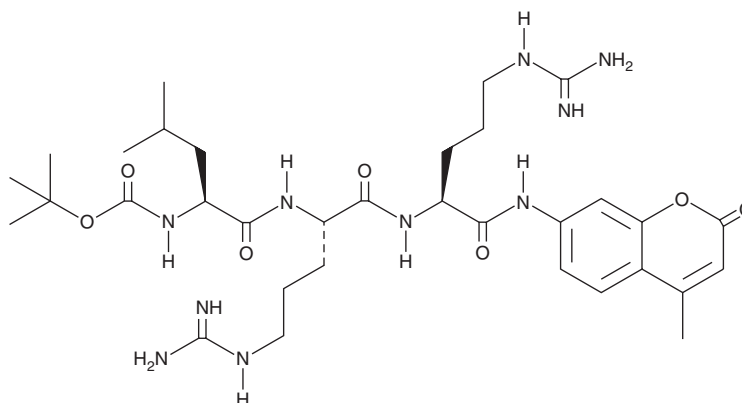
UV/Vis.: λ_{max} : 328 nm

Ex./Em. Max: 340-360/440-460 nm, respectively

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥ 2 years



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

Laboratory Procedures

Boc-LRR-AMC is supplied as a crystalline solid. A stock solution may be made by dissolving the Boc-LRR-AMC in the solvent of choice. Boc-LRR-AMC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of Boc-LRR-AMC in these solvents is approximately 10, 12, and 14 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of Boc-LRR-AMC can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of Boc-LRR-AMC in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Boc-LRR-AMC is a fluorogenic substrate for the trypsin-like activity of the 26S proteasome or 20S proteolytic core.^{1,2} Upon enzymatic cleavage by the 26S proteasome or 20S proteolytic core, amino-4-methylcoumarin (AMC) is released and its fluorescence can be used to quantify 26S proteasome or 20S proteolytic core trypsin-like activity. AMC displays excitation/emission maxima of 340-360/440-460 nm, respectively.

References

1. Prudnikov, I.M. and Smirnov, A.N. Short peptide tools for monitoring caspase and proteasome activities in embryonal and adult rat brain lysates: An approach for the differential identification of proteases. *J. Biochem.* **151**(3), 299-316 (2012).
2. Aki, M., Shimbara, N., Takashina, M., et al. Interferon- γ induces different subunit organizations and functional diversity of proteasomes. *J. Biochem.* **115**(2), 257-269 (1994).

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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