

# PRODUCT INFORMATION

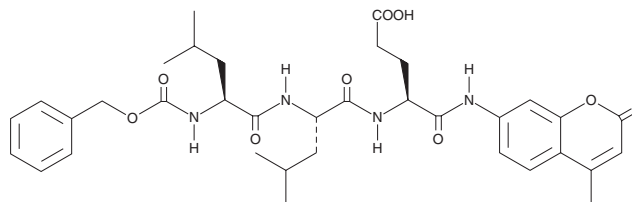


## Z-LLE-AMC

Item No. 10008117

**CAS Registry No.:** 348086-66-8  
**Formal Name:** N-[(phenylmethoxy)carbonyl]-L-leucyl-L-leucyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)-L- $\alpha$ -glutamine  
**Synonyms:** Z-Leu-Leu-Glu-AMC, Z-Leu-Leu-Glu-7-amido-4-Methylcoumarin, Proteasome Substrate II

**MF:** C<sub>35</sub>H<sub>44</sub>N<sub>4</sub>O<sub>9</sub>  
**FW:** 664.8  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 230, 299, 328 nm  
**Ex./Em. Max:** 340-360/440-460 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



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

### Laboratory Procedures

Z-LLE-AMC is supplied as a solid. A stock solution may be made by dissolving the Z-LLE-AMC in the solvent of choice, which should be purged with an inert gas. Z-LLE-AMC is soluble in the organic solvent DMSO at a concentration of approximately 50 mg/ml.

### Description

Z-LLE-AMC is a fluorogenic substrate for the caspase-like post-glutamate peptide hydrolase of the 26S proteasome or 20S proteolytic core.<sup>1,2</sup> Caspase-like activity can be quantified by fluorescent detection of free AMC (also known as 7-amino-4-methylcoumarin), which is excited at 340-360 nm and emits at 440-460 nm. Z-LLE-AMC is typically used in cell lysates after experimental treatment.<sup>3,4</sup>

### References

1. Orłowski, M., Cardozo, C., Hidalgo, M.C., *et al.* Regulation of the peptidylglutamyl-peptide hydrolyzing activity of the pituitary multicatalytic proteinase complex. *Biochem.* **30(24)**, 5999-6005 (1991).
2. Geier, E., Pfeifer, G., Wilm, M., *et al.* A giant protease with potential to substitute for some functions of the proteasome. *Science* **283(5404)**, 978-981 (1999).
3. Hamouda, M.-A., Belhacene, N., Puissant, A., *et al.* The small heat shock protein B8 (HSPB8) confers resistance to bortezomib by promoting autophagic removal of misfolded proteins in multiple myeloma cells. *Oncotarget* **5(15)**, 6252-6266 (2014).
4. Tadlock, L., Yamagiwa, Y., Hawker, J., *et al.* Transforming growth factor- $\beta$  inhibition of proteasomal activity: A potential mechanism of growth arrest. *Am. J. Physiol. Cell Physiol.* **285(2)**, C277-C285 (2003).

#### 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

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#### 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