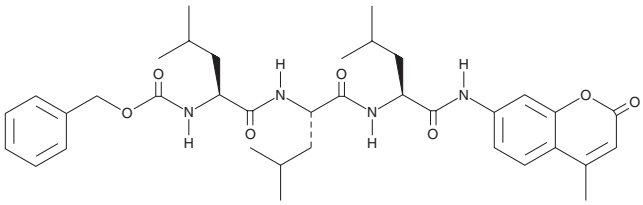
PRODUCT INFORMATION

Z-LLL-AMC

Item No. 10008118

CAS Registry No.:	152015-61-7
Formal Name:	N-[(phenylmethoxy)carbonyl]-L-leucyl-L-leucyl-N-(4-methyl-2-oxo-2H-1-benzopyran-7-yl)-L-leucinamide
Synonyms:	Z-Leu-Leu-Leu-AMC, Z-Leu-Leu-Leu-7-amido-4-Methylcoumarin, Proteasome Substrate I
MF:	$C_{36}H_{48}N_4O_7$
FW:	648.8
Purity:	≥98%
Ex./Em. Max:	340-360/440-460 nm
Supplied as:	A 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

Z-LLL-AMC is supplied as a solid. A stock solution may be made by dissolving the Z-LLL-AMC in the solvent of choice, which should be purged with an inert gas. Z-LLL-AMC is soluble in organic solvents such as acetone, DMSO, and dimethyl formamide.

Description

Z-LLL-AMC is a fluorogenic substrate for the chymotrypsin-like activity of the 26S proteasome or 20S proteolytic core.[1-3] Chymotrypsin-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-LLL-AMC is typically used in cell lysates after experimental treatment.[4]

References

1. Tsubuki, S., Saito, Y., and Kawashima, S. Purification and characterization of an endogenous inhibitor specific to the Z-Leu-Leu-Leu-MCA degrading activity in proteasome and its identification as heat-shock protein 90. *FEBS Lett.* **344(203)**, 229-233 (1994).
2. Tsubuki, S., Kawasaki, H., Saito, Y., *et al.* Purification and characterization of a Z-Leu-Leu-Leu-MCA degrading protease expected to regulate neurite formation: A novel catalytic activity in proteasome *Biochem. Biophys. Res. Commun.* **196(3)**, 1995-1201 (1993).
3. Lynas, J.F., Harriott, P., Healy, A., *et al.* Inhibitors of the chymotrypsin-like activity of proteasome based on di- and tri-peptidyl α-keto aldehydes (glyoxals). *Bioorg. Med. Chem. Lett.* **8(4)**, 373-378 (1998).
4. Figueiredo-Pereira, M.E., Chen, W.E., Li, J., *et al.* The antitumor drug aclacinomycin A, which inhibits the degradation of ubiquitinated proteins, shows selectivity for the chymotrypsin-like activity of the bovine pituitary 20 S proteasome. *J. Biol. Chem.* **271(28)**, 16455-16459 (1996).

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