

PRODUCT INFORMATION

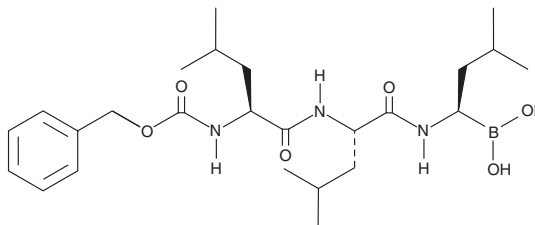


Z-Leu-Leu-Leu-B(OH)₂

Item No. 10008311

CAS Registry No.: 179324-22-2
Formal Name: N-[(phenylmethoxy)carbonyl]-L-leucyl-N-[(1R)-1-borono-3-methylbutyl]-L-leucinamide

Synonym: MG 262
MF: C₂₅H₄₂BN₃O₆
FW: 491.4
Purity: ≥95%
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-Leu-Leu-Leu-B(OH)₂ is supplied as a solid. A stock solution may be made by dissolving the Z-Leu-Leu-Leu-B(OH)₂ in the solvent of choice, which should be purged with an inert gas. Z-Leu-Leu-Leu-B(OH)₂ is soluble in DMSO.

Description

Z-Leu-Leu-Leu-B(OH)₂ is a proteasome inhibitor with diverse biological activities.¹⁻³ It inhibits LPS-induced expression of FMS-related tyrosine kinase 1 (*FLT1*) in isolated human microvascular endothelial cells and macrophages.¹ Z-Leu-Leu-Leu-B(OH)₂ (1 μM) reduces heat shock-induced increases in heat shock protein 70 (Hsp70) levels in neonatal rat cardiomyocytes.² *In vivo*, Z-Leu-Leu-Leu-B(OH)₂ (1 μmol/kg) induces accumulation of the Ub^{G76V}-GFP reporter, which is constitutively targeted for ubiquitin-dependent proteasomal degradation, in and apoptosis of growth plate chondrocytes, as well as growth retardation in mice.³

References

1. Mezquita, J., Mezquita, B., Pau, M., *et al.* Down-regulation of Flt-1 gene expression by the proteasome inhibitor MG262. *J. Cell. Biochem.* **89(6)**, 1138-1147 (2003).
2. Stangl, K., Günther, C., Frank, T., *et al.* Inhibition of the ubiquitin-proteasome pathway induces differential heat-shock protein response in cardiomyocytes and renders early cardiac protection. *Biochem. Biophys. Res. Commun.* **291(3)**, 542-549 (2002).
3. Zaman, F., Menendez-Benito, V., Eriksson, E., *et al.* Proteasome inhibition up-regulates p53 and apoptosis-inducing factor in chondrocytes causing severe growth retardation in mice. *Cancer Res.* **67(20)**, 10078-10086 (2007).

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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