

Certificate of Analysis

www.tocris.com

Product Name: MG 132

Catalog No.: 1748

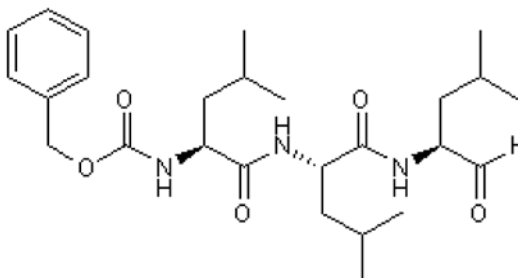
Batch No.: 11

CAS Number: 133407-82-6

IUPAC Name: *N*-[(Phenylmethoxy)carbonyl]-L-leucyl-*N*-[(1*S*)-1-formyl-3-methylbutyl]-L-leucinamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₆H₄₁N₃O₅
Batch Molecular Weight: 475.63
Physical Appearance: White solid
Solubility: ethanol to 100 mM
DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = -59.3 (Concentration = 1, Solvent = Chloroform)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.66	8.69	8.83
Found	65.42	8.72	9.01

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel: +1 612 379 2956

Product Name: MG 132

Catalog No.: 1748

Batch No.: 11

CAS Number: 133407-82-6

IUPAC Name: *N*-[(Phenylmethoxy)carbonyl]-L-leucyl-*N*-[(1*S*)-1-formyl-3-methylbutyl]-L-leucinamide

Description:

Potent cell-permeable inhibitor of proteasome ($IC_{50} = 100$ nM) and calpain ($IC_{50} = 1.2$ μ M). Inhibits TNF- α -induced NF- κ B activation and I κ B α degradation. Induces neurite outgrowth in PC12 cells and has anticancer properties in vitro. Inhibits SARS-CoV-2 M^{pro} in vitro ($IC_{50} = 3.9$ μ M) and inhibits viral replication.

Physical and Chemical Properties:

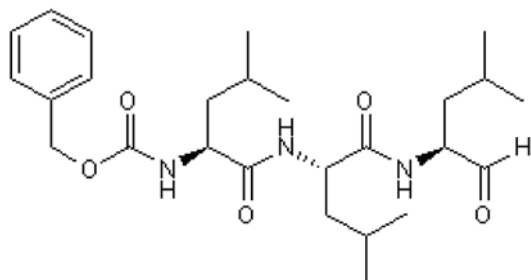
Batch Molecular Formula: C₂₆H₄₁N₃O₅

Batch Molecular Weight: 475.63

Physical Appearance: White solid

Minimum Purity: $\geq 95\%$

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

ethanol to 100 mM

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ma et al (2020) Boceprevir, GC-376, and calpain inhibitors II, XII inhibit SARS-CoV-2 viral replication by targeting the viral main protease. *Cell Res.* PMID: 32541865.

Banerjee and Liefshitz (2001) Potential of the proteasome inhibitor MG-132 as an anticancer agent, alone and in combination. *Anticancer Res.* **21** 3941. PMID: 11911275.

Tsubuki et al (1996) Differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-Leucine and tri-Leucine. *J.Biochem.* **119** 572. PMID: 8830056.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956