

Product Name: MG 101

Catalog No.: 3358

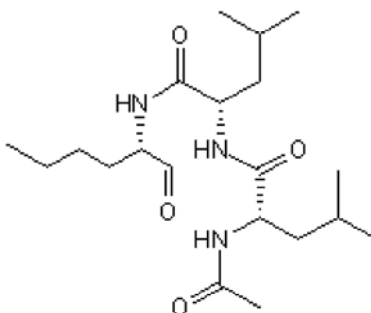
Batch No.: 5

CAS Number: 110044-82-1

IUPAC Name: *N*-Acetyl-L-leucine-L-leucine-L-norleucinal

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₃₇N₃O₄
Batch Molecular Weight: 383.53
Physical Appearance: White solid
Solubility: DMSO to 50 mM
ethanol to 25 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

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

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Description:

Calpain inhibitor (IC₅₀ = 0.09 μM) that activates p53-dependent apoptosis in tumor cell lines. Increases activated p53, p21 and caspase levels and promotes cell cycle arrest through inhibition of cyclin D degradation in vitro. Also attenuates ischemia/reperfusion injury in cardiomyocytes, hepatocytes and renal tubular cells through downregulation of iNOS and COX-2 expression.

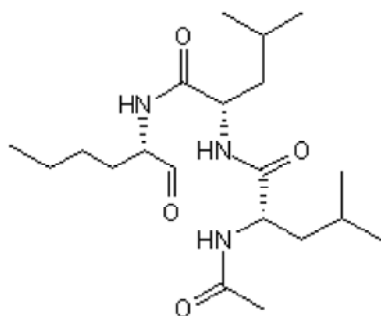
Physical and Chemical Properties:

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Solubility & Usage Info:

DMSO to 50 mM

ethanol to 25 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:

Perrin et al (2002) In vitro antioxidant properties of calpain inhibitors: leupeptin and calpain inhibitor-1. *Cell Mol.Biol.* **48** OL267.

Chatterjee et al (2001) Calpain inhibitor-1 reduces renal ischemia/reperfusion injury in the rat. *Kidney Int.* **59** 2073. PMID: 11380809.

Atencio et al (2000) Calpain inhibitor 1 activates p53-dependent apoptosis in tumor cell lines. *Cell Growth Differ.* **11** 247. PMID: 10845425.

Sherwood et al (1993) *In vivo* inhibition of cyclin B degradation and induction of cell-cycle arrest in mammalian cells by the neutral cysteine protease inhibitor N-acetylleucylleucylnorleucinal. *Proc.Natl.Acad.Sci.USA* **90** 3353.

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