Name: MG132
Cat No: HB4135

Biological description: MG-132 is a potent, cell-permeable proteasome inhibitor ($IC_{50} = 100$ nM) which blocks the proteolytic activity of the 26S proteasome complex. It induces cell cycle arrest and triggers apoptosis to inhibit cell growth.

Shows anti-cancer activity in vivo and is also calpain inhibitor.

This is the (S),(S),(S)- stereoisomer.

Alternative names: Z-LLL-al, Z-Leu-Leu-Leu-CHO

Biological action: Inhibitor

Purity: >97%

Properties
Chemical name: N-[(Phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formyl-3-methylbutyl]-L-leucinamide

Molecular Weight: 475.62

Chemical structure:

Molecular Formula: C_{26}H_{41}N_{3}O_{5}

CAS Number: 133407-82-6

PubChem identifier: 462382

SMILES: CC(C)[C@@H](C=O)NC(=O)(CC(C)C)NC(=O)(C@H)(CC(C)C)NC(=O)OCC1=CC=CC=C1

Source: Synthetic

InChi: InChI=1S/C_{26}H_{41}N_{3}O_{5}/c1-17(2)12-21(15-30)27-24(31)22(13-18(3)4)28-25(32)23(14-19(5)6)29-26(33)34-16-20-10-8-7-9-11-20/h7-11,15,17-19,21-23H,12-14,16H2,1-6H3,(H,27,31)(H,28,32)(H,29,33)/t21-,22-,23-/m0/s1

InChiKey: TZYWCYJVHRLUCT-VABKMULXSA-N

MDL number: MFCD00674886

Appearance: White solid
Storing and Using Your Product

Storage instructions
-20°C (desiccate)

Solubility overview
Soluble in DMSO (100mM) and in ethanol (100mM)

Important
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

References for MG132

The effect of MG132, a proteasome inhibitor on HeLa cells in relation to cell growth, reactive oxygen species and GSH.
PubMedID: 19513526

Potential of the proteasomal inhibitor MG-132 as an anticancer agent, alone and in combination.
Banerjeet and Liefshitz (2001) Anticancer Res 21(6A)
PubMedID: 11911275

Differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-leucine and tri-leucine.
PubMedID: 8830056