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DATASHEET

MG132

Product overview

Name	MG132
Cat No	HB4135
Alternative names	Z-LLL-al, Z-Leu-Leu-Leu-CHO
Biological action	Inhibitor
Purity	>95%
Description	Potent, cell-permeable proteasome inhibitor. Calpain inhibitor. Apoptosis inducer.

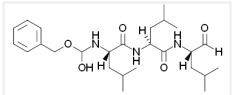
Biological Data

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.

Solubility & Handling

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.

Chemical Data

Chemical name	N-[(Phenylmethoxy)carbonyl]-L-leucyl-N-[(1S)-1-formyl-3-methylbutyl]-L-leucinamide
Molecular Weight	475.62
Chemical structure	
Molecular Formula	$C_{26}H_{41}N_3O_5$
CAS Number	133407-82-6
PubChem identifier	462382
SMILES	CC(C)C[C@@H](C=O)NC(=O)[C@H](CC(C)C)NC(=O)[C@H](CC(C)C)NC(=O)OCC1=CC=CC=C1
Source	Synthetic
InChi	InChI=1S/C26H41N3O5/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

References

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

Han et al (2009) Oncol Rep 22(1)
PubMedID 19513526

Potential of the proteasomal inhibitor MG-132 as an anticancer agent, alone and in combination.

Banerjeet and Liefshitz (2001) Anticancer Res 3941-7
PubMedID 11911275

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

Tsubuki et al (1996) J Biochem 119(3)
PubMedID 8830056