Catalog # 10-1309

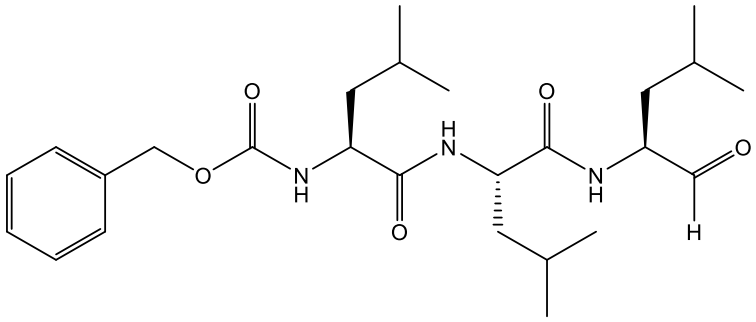
MG-132

CAS# 133407-82-6

N-(Benzyloxycarbonyl)leucinylleucinylleucinal

Z-Leu-Leu-Leu-CHO

Lot # X104137



Specific inhibitor of the chymotrypsin-like activity of the 20S proteasome (IC_{50}=100 nM with Z-LLL-AMC as substrate).[1] Also inhibits calpain (IC_{50}=1.25 μM)[1] Suppresses gastric cancer cell proliferation and induces macro-autophagy[2]. Activates stress kinases and induces Hsp72.[3] Induces neurite outgrowth.[1] Blocks NFκB activation by blocking IκB proteolysis (IC_{50}=3 μM).[4] Cell permeable.

1) Tsubuki *et al*. (1996), *Differential inhibition of calpain and proteasome activities by peptidyl aldehydes of di-leucine and tri-leucine* ; J. Biochem., **119** 572
2) Wu *et al*. (2010), *Macroautophagy and ERK phosphorylation counteract the antiproliferative effect of proteasome inhibitor in gastric cancer cells;* Autophagy, **6** 228
3) Meriin *et al*. (1998), *Proteasome inhibitors activate stress kinases and induce Hsp72. Diverse effects on apoptosis;* J. Biol. Chem., **273** 6373
4) Fiedler *et al*. (1998), *Inhibition of TNF-alpha-induced NF-kappaB activation and IL-8 release in A549 cells with the proteasome inhibitor MG-132*; Am. J. Respir. Cell Mol. Biol., **19** 259

PHYSICAL DATA

Molecular Weight:	475.63
Molecular Formula:	$C_{26}H_{41}N_3O_5$
Purity:	98% by HPLC
Solubility:	DMSO (up to 45 mg/ml), DMF (up to 45 mg/ml) or ethanol (up to 45 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Protect from exposure to moisture. Solutions in DMSO, DMF, or ethanol may be stored at -20°C for up to 1 week

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