NEUROMICS

MG-132 Data Sheet

Catalog Number:	MC11068	**Product Type:**	Small Molecule
Bio-Activity:	Proteasome inhibitor	**CAS #:**	133407-82-6
Research Categories:	Ubiquitin/proteasome, cell death, stem cells, cancer, diabetes, inflammation, heart disease	**Chemical Name:**	N-(Benzyloxycarbonyl)leucinylleucinylleucinal
Solubility:	Soluble in DMSO (up to 45 mg/ml), in DMF (up to 45 mg/ml), or in Ethanol (up to 45 mg/ml).	**Molecular Formula:**	C26H41N3O5
Purity:	> 98%	**Molecular Weight:**	475.6
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Specific inhibitor of the chymotrypsin-like activity of the 20S proteasome (IC50=100 nM with Z-LLL-AMC as substrate) [1]. Also inhibits calpain (IC50=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 (IC50=3 µM) [4]. Cell permeable.

References:

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

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