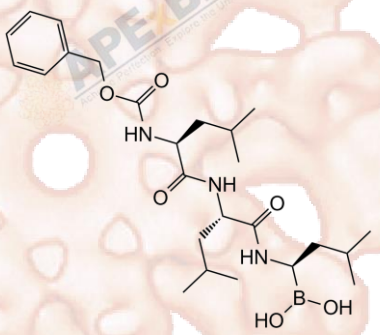
Product Data Sheet

MG-262



Cat. No.:	A8179
CAS No.:	179324-22-2
Formula:	C25H42BN3O6
M.Wt:	491.44
Synonyms:	PS-III,MG262,MG 262
Target:	Ubiquitination/ Proteasome
Pathway:	Proteasome
Storage:	Store at -20°CThe product is not stable in solution, please dissolve it immediately before use.

Solvent & Solubility

In Vitro

⩾24.57 mg/mL in DMSO; insoluble in H2O; ⩾96.4 mg/mL in EtOH

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.0348 mL	10.1742 mL	20.3484 mL
5 mM	0.4070 mL	2.0348 mL	4.0697 mL
10 mM	0.2035 mL	1.0174 mL	2.0348 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Proteasome inhibitor
IC_{50} & Target	122 nM (proteasome)

In Vitro

Cell Viability Assay

Cell Line:	Peripheral blood mononuclear cells (PBMC)
Preparation method：	The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.

	Reacting conditions:	0.01 μM, 28 days
	Applications:	TRAP positive and multi-nucleated osteoclasts were quantified by light microscopy after 28 days of MG-262 treatment. The used proteasome inhibitor was sufficient for significant inhibition of osteoclast formation, while the effects occurred in a dose-dependent manner. The differentiation was reduced to 27% for 0.01 μM and to 30% for 0.001 μM.
In Vivo	**Animal experiment**	
	Animal models:	GFPdgn TG mice
	Dosage form:	Intravenous injection, 5 μmol/kg, 20 hours
	Applications:	The TG mice were injected with MG-262 or vehicle 20 h before the tissue samples were collected. MG-262 inhibited chymotryptic activity in the heart, lungs, skeletal muscle, and liver by 50–75%. GFPdgn protein abundance in all the major organs showed responsive increases upon systemic proteasomal inhibition induced by MG-262.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Fullbright G, Rycenga HB, et al. "p97 Promotes a Conserved Mechanism of Helicase Unloading during DNA Cross-Link Repair." Mol Cell Biol. 2016Nov 14;36(23):2983-2994.PMID:27644328

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References

[1] Zavrski I, Krebbel H, Wildemann B, et al. Proteasome inhibitors abrogate osteoclast differentiation and osteoclast function. Biochemical and biophysical research communications, 2005, 333(1): 200-205.

[2] Kumarapeli A R K, Horak K M, Glasford J W, et al. A novel transgenic mouse model reveals deregulation of the ubiquitin-proteasome system in the heart by doxorubicin. The FASEB journal, 2005, 19(14): 2051-2053.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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