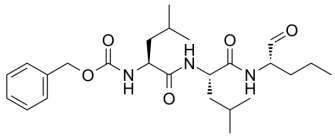
MG-115

Cat. No.:	HY-108552
CAS No.:	133407-86-0
Molecular Formula:	$C_{25}H_{39}N_3O_5$
Molecular Weight:	461.59
Target:	Proteasome; Apoptosis
Pathway:	Metabolic Enzyme/Protease; Apoptosis
Storage:	-20°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (216.64 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1664 mL	10.8321 mL	21.6642 mL
	5 mM	0.4333 mL	2.1664 mL	4.3328 mL
	10 mM	0.2166 mL	1.0832 mL	2.1664 mL

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

BIOLOGICAL ACTIVITY

Description

MG-115 is a potent and reversible proteasome inhibitor, with K_is of 21 nM and 35 nM for 20S and 26S proteasome, respectively. MG-115 specifically inhibit the chymotrypsin-like activity of the proteasome, induces p53-dependent apoptosis [1][2][3].

IC_{50} & Target

Ki: 21 nM (20S proteasome); 35 nM (26 Sproteasome)[1]

In Vitro

MG-115 (0.1-10 μM; 24 h) dose-dependently decreases the viability of HepG2 cells[3].

MG-115 (0.1-10 μM; 24 h) amplifies the reporter gene expression mediated by CWK_{18} DNA condensates[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	HepG2 cells
Concentration:	0.1, 1, 2, 5, 10 μM
Incubation Time:	24 hours

Result:	Dose-dependently decreased cell viability. Inhibited the proteasomal activity, with an IC_{50} of 2 μM.

CUSTOMER VALIDATION

- Biochem Biophys Res Commun. 31 August 2022.

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REFERENCES

[1]. Rock KL, et, al. Inhibitors of the proteasome block the degradation of most cell proteins and the generation of peptides presented on MHC class I molecules. Cell. 1994 Sep 9;78(5):761-71.

[2]. Lopes UG, et, al. p53-dependent induction of apoptosis by proteasome inhibitors. J Biol Chem. 1997 May 16;272(20):12893-6.

[3]. Kim J, et, al. The proteasome metabolizes peptide-mediated nonviral gene delivery systems. Gene Ther. 2005 Nov;12(21):1581-90.

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