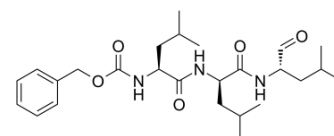


(R)-MG-132

Cat. No.:	HY-13259C
CAS No.:	1211877-36-9
Molecular Formula:	C ₂₆ H ₄₁ N ₃ O ₅
Molecular Weight:	475.62
Target:	Proteasome
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (210.25 mM)
 H₂O : < 0.1 mg/mL (insoluble)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM	2.1025 mL	10.5126 mL	21.0252 mL	
5 mM	0.4205 mL	2.1025 mL	4.2050 mL		
10 mM	0.2103 mL	1.0513 mL	2.1025 mL		

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

In Vivo

- Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
 Solubility: ≥ 0.83 mg/mL (1.75 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% corn oil**
 Solubility: ≥ 0.83 mg/mL (1.75 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(R)-MG-132 ((S,R,S)-(-)-MG-132) is the enantiomer of MG-132. (R)-MG-132 is a **proteasome** inhibitor with weaker cell cytotoxicity than MG-132. (R)-MG-132 stereoisomer is a more potent **proteasome** inhibitor than MG-132^[1].

IC₅₀ & Target

Proteasome^[1]

In Vitro

(R)-MG-132, the stereoisomer of MG-132, is studied as a potential inhibitor of chymotrypsin-like, trypsin-like, and peptidylglutamyl peptide hydrolyzing activities of proteasome^[1].
 MG-132 and (R)-MG-132 are investigated for inhibition of ChTL, trypsin-like (TL) and peptidylglutamyl peptide hydrolyzing (PGPH) activities of purified 20S proteasomes isolated from human erythrocytes. For MG-132, the IC_{50s}

of 0.89 μM , 104.43 μM , and 5.7 μM for ChTL, TL, and PGPH, respectively. For (R)-MG-132, the IC_{50} s of 0.22 μM , 34.4 μM , and 2.95 μM for ChTL, TL, and PGPH, respectively^[1].

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

CUSTOMER VALIDATION

- Nat Struct Mol Biol. 2020 Aug 10.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Mroczkiewicz M, et al. Studies of the synthesis of all stereoisomers of MG-132 proteasome inhibitors in the tumor targeting approach. J Med Chem. 2010 Feb 25;53(4):1509-18.

Caution: Product has not been fully validated for medical applications. For research use only.

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