(1S,2S)-Bortezomib

Cat. No.: HY-135396

CAS No.: 1132709-14-8

Molecular Formula: $C_{19}H_{25}BN_4O_4$

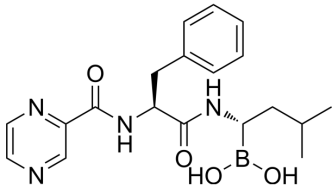
Molecular Weight: 384.24

Target: Proteasome; Apoptosis

Pathway: Metabolic Enzyme/Protease; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (130.13 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6025 mL	13.0127 mL	26.0254 mL
	5 mM	0.5205 mL	2.6025 mL	5.2051 mL
	10 mM	0.2603 mL	1.3013 mL	2.6025 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(1S,2S)-Bortezomib is an enantiomer of Bortezomib. Bortezomib is a cell-permeable, reversible, and selective proteasome inhibitor, and potently inhibits 20S proteasome (K_i of 0.6 nM) by targeting a threonine residue. Bortezomib disrupts the cell cycle, induces apoptosis, and inhibits NF-κB. Bortezomib is an anti-cancer agent and the first therapeutic proteasome inhibitor to be used in humans[1][2][3].

IC_{50} & Target

Ki: 0.6 nM (20S proteasome)[1]

REFERENCES

[1]. Kamalzadeh Z, et al. Determination of Bortezomib in API Samples Using HPLC: Assessment of Enantiomeric and Diastereomeric Impurities. J Chromatogr Sci. 2017 Aug 1;55(7):697-705.

[2]. Adams J, et al. Proteasome inhibitors: a novel class of potent and effective antitumor agents. Cancer Res. 1999 Jun 1;59(11):2615-22.

[3]. Shahshahan MA, et al. Potential usage of proteasome inhibitor bortezomib (Velcade, PS-341) in the treatment of metastaticmelanoma: basic and clinical aspects. Am J Cancer Res. 2011;1(7):913-24.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA