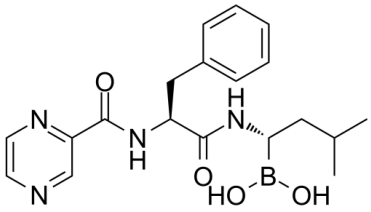
Data Sheet

Product Name:	(1S,2S)-Bortezomib
Cat. No.:	CS-0112392
CAS No.:	1132709-14-8
Molecular Formula:	$C_{19}H_{25}BN_4O_4$
Molecular Weight:	384.24
Target:	Apoptosis; Proteasome
Pathway:	Apoptosis; Metabolic Enzyme/Protease
Solubility:	DMSO : 50 mg/mL (130.13 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

(1S,2S)-Bortezomib is an enantiomer of Bortezomib. Bortezomib is a cell-permeable, reversible, and selective **proteasome** inhibitor, and potently inhibits **20S proteasome** ($\mathbf{K_i}$ 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]. IC50 & 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.

CAIndexNames:

Boronic acid, B-[(1S)-3-methyl-1-[[(2S)-1-oxo-3-phenyl-2-[(2-pyrazinylcarbonyl)amino]propyl]amino]butyl]-

SMILES:

OB([C@H](NC([C@@H](NC(C1=NC=CN=C1)=O)CC2=CC=CC=C2)=O)CC(C)C)O

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

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