



LKT Laboratories, Inc.

## Bortezomib

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### Product Information

**Product ID** B5871

**CAS No.** 179324-69-7

**Chemical Name** [(1R)-3-Methyl-1-[[[(2S)-3-phenyl-2-(pyrazine-2-carbonylamino)propanoyl] amino]butyl]boronic acid

**Synonym** Velcade, PS-341

**Formula** C<sub>19</sub>H<sub>25</sub>BN<sub>4</sub>O<sub>4</sub>

**Formula Wt.** 384.24

**Melting Point** 124-140 °C

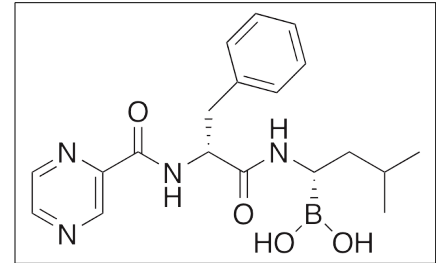
**Purity** ≥98%

**Solubility** DMSO 77mg/mL

**Store Temp** -20 °C

**Ship Temp** Ambient

**Description** Bortezomib is a proteasome inhibitor that displays anticancer chemotherapeutic and antiviral activity in vitro, in vivo, and in clinical settings; it is clinically used or in trials for treatment of glioma, acute lymphoblastic leukemia (ALL), mantle cell lymphoma, and multiple myeloma. In glioma cells, bortezomib induces activation of caspase 3 and apoptosis; its inhibition of the proteasome stimulates angiogenesis through an increase in production of VEGF and HIF-1 $\alpha$ . In colorectal cancer cells, bortezomib increased levels of ROS, inducing G2/M phase cell cycle arrest. Additionally, bortezomib induces neuropathy, potentially through increasing polymerized tubulin levels in neurons. In models of Rift Valley Fever Virus, bortezomib decreases viral load by suppressing nonstructural S-segment protein formation of nuclear filaments.



**Bulk quantities available upon request**

Product ID	Size
B5871	5 mg
B5871	25 mg
B5871	100 mg

**References** Keck F, Amaya M, Kehn-Hall K, et al. Characterizing the effect of Bortezomib on Rift Valley Fever Virus multiplication. *Antiviral Res.* 2015 May 19. [Epub ahead of print]. PMID: 26001632.

Bota DA, Alexandru D, Keir ST, et al. Proteasome inhibition with bortezomib induces cell death in GBM stem-like cells and temozolomide-resistant glioma cell lines, but stimulates GBM stem-like cells' VEGF production and angiogenesis. *J Neurosurg.* 2013 Dec;119(6):1415-23. PMID: 24093630.

Staff NP, Podratz JL, Grassner L, et al. Bortezomib alters microtubule polymerization and axonal transport in rat dorsal root ganglion neurons. *Neurotoxicology.* 2013 Dec;39:124-31. PMID: 24035926.

Du XL, Chen Q. Recent advancements of bortezomib in acute lymphocytic leukemia treatment. *Acta Haematol.* 2013;129(4):207-14. PMID: 23295437.

Hong YS, Hong SW, Kim SM, et al. Bortezomib induces G2-M arrest in human colon cancer cells through ROS-inducible phosphorylation of ATM-CHK1. *Int J Oncol.* 2012 Jul;41(1):76-82. PMID: 22552540.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.