

Bortezomib

✓ 2.5 mg

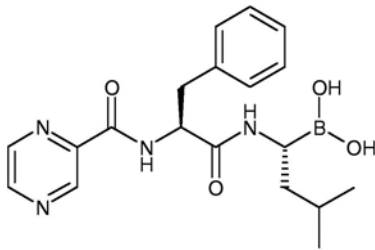
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For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Bortezomib, a boronic acid dipeptide, is a specific, potent, and reversible proteasome inhibitor that has also been shown to have a stabilizing effect on proteins that inhibit cell survival and cell cycle progression, such as p53 (1,2). Researchers have demonstrated that bortezomib inhibits activation and nuclear translocation of NF-κB, subsequently decreasing early tumor survival (3). The increase in bortezomib-stabilized, misfolded, and ubiquitinated proteins that interfere with cell survival and other important pathways, further support its anti-tumor effects (3).

Molecular Formula: C₁₉H₂₅BN₄O₄



Molecular Weight: 384.24 g/mol

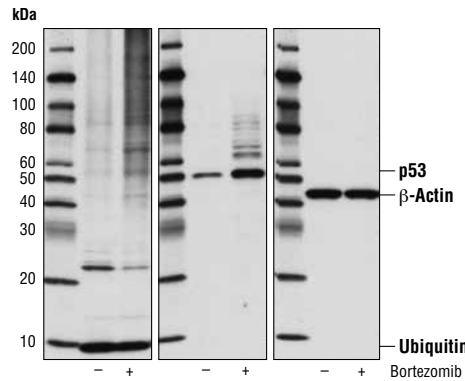
Solubility: Soluble in DMSO and ethanol at 200 mg/ml, very poorly soluble in plain water.

Purity: 99%

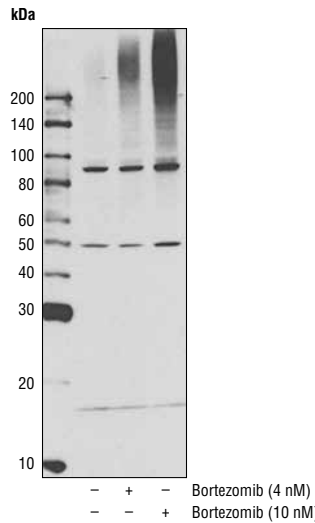
Directions for Use: Bortezomib is supplied as a lyophilized powder. For a 1 mM stock, reconstitute the 2.5 mg in 6.51 ml DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used at 1-1000 nM for 2-48 hours.

Background References:

- (1) Williams, S.A. and McConkey, D.J. (2003) *Cancer Res* 63, 7338-44.
- (2) Poulaki, V. et al. (2007) *Invest Ophthalmol Vis Sci* 48, 4706-19.
- (3) Mimnaugh, E.G. et al. (2004) *Mol Cancer Ther* 3, 551-66.



Western blot analysis of extracts from NIH/3T3 cells, untreated (-) or treated (+) with Bortezomib (100 nM, 6 hr), using Ubiquitin Antibody #3933 (left), p53 (1C12) Mouse mAb #2524 (middle), and β-Actin (13E5) Rabbit mAb #4970 (right).



Western blot analysis of L363 cells, untreated (-) or treated (+) with Bortezomib (24 hr) as indicated, using K48-linkage Specific Polyubiquitin Antibody #4289.

Storage: Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.