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Store at -20C
#2204

Bortezomib

2.5 mg

For Research Use Only. Not for Use in Diagnostic Procedures.

Background

Bortezomib (C₁₉H₂₅BN₄O₄), 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

Purity

99%

CAS

179324-69-7

Solubility

Soluble in DMSO and EtOH at 200mg/ml.

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.

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

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.

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