**Product Information**

**Epoxomicin**  
*Item No. 10007806*

**CAS Registry No.:** 134381-21-8  
**Formal Name:** N-acetyl-N-methyl-L-isoleucyl-L-isoleucyl-N-[1(S)-3-methyl-1-[(2R)-2-methyloxirany] [carbonyl] [butyl]-L-threoninamide  
**Synonym:** BU 4061T  
**MF:** C_{32}H_{50}N_{12}O_{7}  
**FW:** 554.7  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in DMSO

**Laboratory Procedures**

For long term storage, we suggest that epoxomicin be stored as supplied at -20°C. It should be stable for at least one year.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one year.

Epoxomicin is a potent anti-tumor agent isolated from *Actinomycetes* that is used as a selective and irreversible inhibitor of the 20S proteasome. It inhibits proteasome activity in cell growth assays with an IC_{50} value of 4 nM and demonstrates potent cytotoxicity against B16-F10, HCT116, and Moser solid tumor cells, as well as P388 and K562 leukemia cells with IC_{50} values ranging from 2-44 nM.\(^{1,2}\) By inhibiting osteoblast proteasome activity, epoxomicin stimulates bone formation at concentrations as low as 10 nM.\(^{3}\) Intraperitoneal injection of 1.5 mg/kg epoxomicin given daily for two weeks induces Parkinson’s-like symptoms in rats and addition of 100 nM epoxomicin to rat ventral midbrain cultures results in apoptosis specific to dopaminergic neurons.\(^{4,5}\) Epoxomicin-induced parkinsonism can be a useful model to examine mechanisms and therapies for the disease.

**References**


**Related Products**

IU1 - Item No. 10617 • Lactacystin - Item No. 70980 • Clasto-Lactacystin β-lactone - Item No. 70988 • Salinosporamide A - Item No. 10007311 • Salinosporamide B - Item No. 10007563

**WARNING:** This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

**MATERIAL SAFETY DATA**

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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