

Catalog No. 11216-041 200 µg

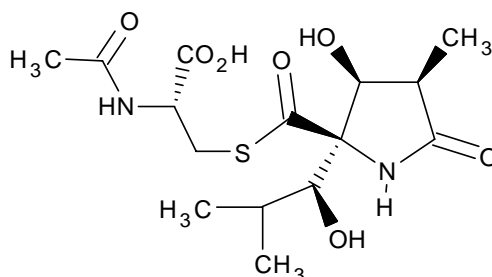
PRODUCT: Lactacystin

CAS NO: 133343-34-7

CATALOG NO.: 11216-041

SIZE: 200 µg

STRUCTURE:



PHYSICAL APPEARANCE: White solid

MOLECULAR FORMULA: C₁₅H₂₄N₂O₇S

MOLECULAR WEIGHT: 376.4

PURITY: 99% (NMR)

SOLUBILITY: Soluble in water (10mg/ml)

STORAGE: Store, as supplied, at -20°C for up to 1 year. Store solutions at -20°C for up to 3 months.

APPLICATION NOTES: A potent and selective proteasome inhibitor which affects all three ATP-independent activities of 20S proteasome (inhibitions of chymotrypsin- and trypsin-like are irreversible; pep.glu-like is reversible)¹. Highly specific, *viz.* 100µM has no effect on chymotrypsin, trypsin or papain after 48 hrs¹, however lactacystin has been shown to inhibit a cathepsin A-like enzyme at micromolar concentrations⁴. Radiolabeling of cells/crude extracts labels primarily X/MB1 proteasome subunit (24 kD) and to a lesser extent, the proteasome α-chain (~30kD).¹ Inhibits NF-κB activation (IC₅₀ = 10µM)². Induces neurite outgrowth in Neuro 2A mouse neuroblastoma cells³. The product is not sterile.

REFERENCES:

1. G. Fenteany *et al. Science* 1995 **268** 726
2. J. Adams and R. Stein *Am.Rep.Med.Chem.* 1996 **31** 279
3. G. Fenteany *et al. Proc. Natl. Acad. Sci.USA* 1994 **91** 3358
4. H. Ostrowska *et al. Int. J. Biochem. Cell Biol.* 2000 **32** 747

The pharmacological and toxicological properties of this product have not been fully investigated. Exercise caution in use and handling. This product must not be used in humans.