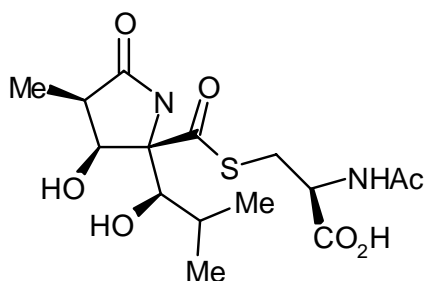


MATERIAL DATA SHEET**Lactacystin, Synthetic****Cat. # I-114**

Potent, highly specific, irreversible and cell-permeable inhibitor that covalently modifies the catalytic β subunits (chymotrypsin-, trypsin- and caspase-like activities) of the proteasome. Lactacystin is hydrolyzed in aqueous solutions to a clasto-lactacystin β -lactone intermediate which is the active inhibitory species that reacts with the proteasome.

Product Information**Quantity:** 100 μ g**FW:** 376.4**Structure:****Physical/Chemical Characteristics****Solubility:** Soluble and stable in DMSO or MeCN up to 20 mg/ml. Pellet dry compound prior to DMSO addition. Subject to hydrolysis in aqueous buffers.**Purity:** > 98% by HPLC. Structure confirmed by $^1\text{H-NMR}$.**Activity:** $k_{\text{obs}} / [\text{I}] = 4,000 \text{ M}^{-1} \text{ s}^{-1}$ vs. 20S:PA28 complex.
Inhibits ubiquitin proteasome pathway in cell culture ($\text{IC}_{50} = 10 \mu\text{M}$).**Use & Storage****Storage:** Store at -20°C . Avoid multiple freeze/thaw cycles.**Literature****References:** Dick R.L., *et al.* (1996) *J. Biol. Chem.* **271**:7273-7276
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