

## Clasto-lactacystin $\beta$ -lactone

**Catalog #:** 27224

**Lot #:** 120628

**Size:** 50  $\mu$ g

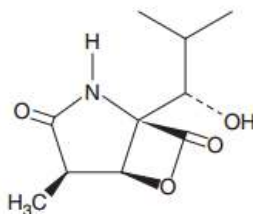
**Structure:**

**CAS Registry #:** 154226-60-5

**Purity:**  $\geq$ 98%

**Chemical Formula:** C<sub>10</sub>H<sub>15</sub>NO<sub>4</sub>

**Molecular Weight:** 213.2



**Description:** Clasto-lactacystin  $\beta$ -lactone, also known as Omuralide and  $\beta$ -Clastolactacystin, is an irreversible proteasome inhibitor. It is an active metabolite of lactacystin which induces differentiation and inhibition of cell cycle progression in several tumor cell lines. It was shown to alkylate subunit X of the 20s proteasome resulting in the accumulation of ubiquitinated proteins which normally undergo rapid degradation. Therefore, the effects are pleiotropic and largely depend on the expression pattern of signaling proteins within the treated cell.

**Appearance:** A solution in methyl acetate

**Solubility:** -

**Biological Activity:** Clasto-lactacystin  $\beta$ -lactone inhibits ubiquitin proteasome pathways in cell culture with an IC<sub>50</sub> value of 1  $\mu$ M.

**Storage/Stability:** Store at or below -20°C for up to two years.

**Quality Control:** The purity was determined by HPLC analysis.

### Reference(s):

1. Omura, S., *et al.*, *J. Antibiotics* 1991;**44**:113-116.
2. Corey, E.J., *et al.*, *J. Am. Chem. Soc.* 1992;**114**:10677-10678.
3. Fenteany, G., *et al.*, *J Biol. Chem.* 1998;**273**(15):8545-8548.
4. Fenteany, G., *et al.*, *Proc. Natl. Acad. Sci. USA* 1994;**91**:3358-3362.