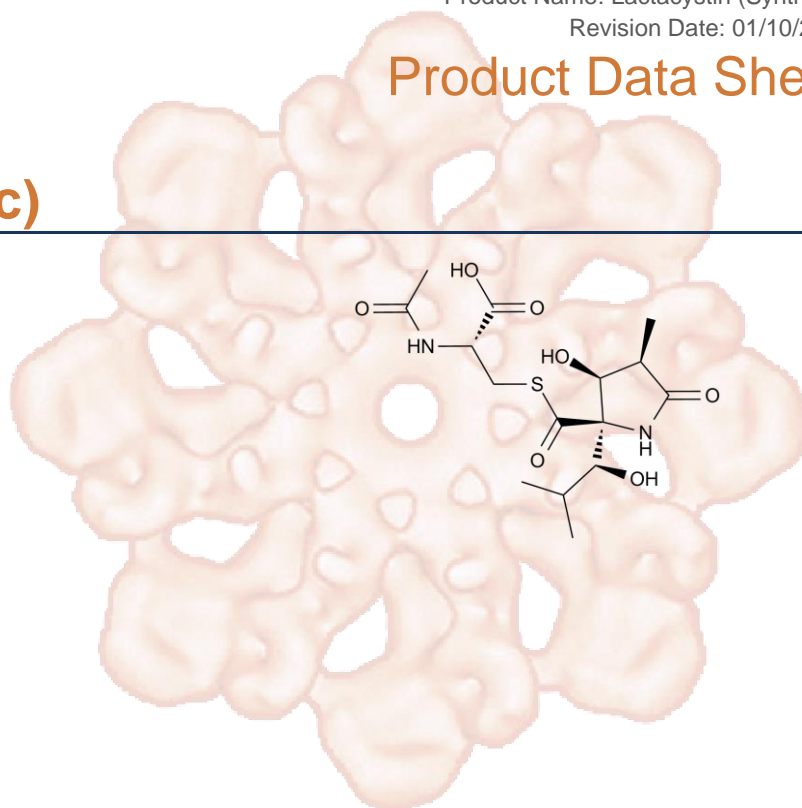


Product Data Sheet

Lactacystin (Synthetic)

Cat. No.:	A2583
CAS No.:	133343-34-7
Formula:	C ₁₅ H ₂₄ N ₂ O ₇ S
M.Wt:	376.42
Synonyms:	
Target:	Ubiquitination/ Proteasome
Pathway:	Proteasome
Storage:	Store at -20°C



Solvent & Solubility

 Soluble in H₂O

In Vitro

Preparing Stock Solutions	Solvent Concentration	Mass	1mg	5mg	10mg
	1 mM		2.6566 mL	13.2830 mL	26.5661 mL
	5 mM		0.5313 mL	2.6566 mL	5.3132 mL
	10 mM		0.2657 mL	1.3283 mL	2.6566 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Proteasome inhibitor

 IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: C6 cells

Preparation method: The solubility of this compound in sterile water is 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

Reacting conditions: 2.5, 5 or 10 μM

Applications: Compared with no treatment, Lactacystin significantly inhibited the proliferation

of C6 cells at the 3 indicated doses. In addition, Lactacystin at all concentrations also significantly increased the number of apoptotic cells and decreased mitochondrial membrane potential when compared with the control group.

Animal experiment

Animal models:	Nude mice bearing gliomas
Dosage form:	1.0 µg or 5.0 µg per 20 g body weight; i.p.; q.d., for 7 days
Applications:	In nude mice bearing gliomas, Lactacystin significantly inhibited tumor growth. However, at day 17, tumor volume increased to baseline in all experimental groups. On day 9 after termination of Lactacystin treatment, the tumor staining results revealed that Lactacystin significantly increased the mRNA and protein levels in the ratio of Bax to Bcl-2.
Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

In Vivo

Product Citations

1. Zheng Y, Liu Q, et al. "Zika virus elicits inflammation to evade antiviral response by cleaving cGAS via NS1-caspase-1 axis." EMBO J. 2018 Jul 31. pii: e99347.PMID:30065070

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References

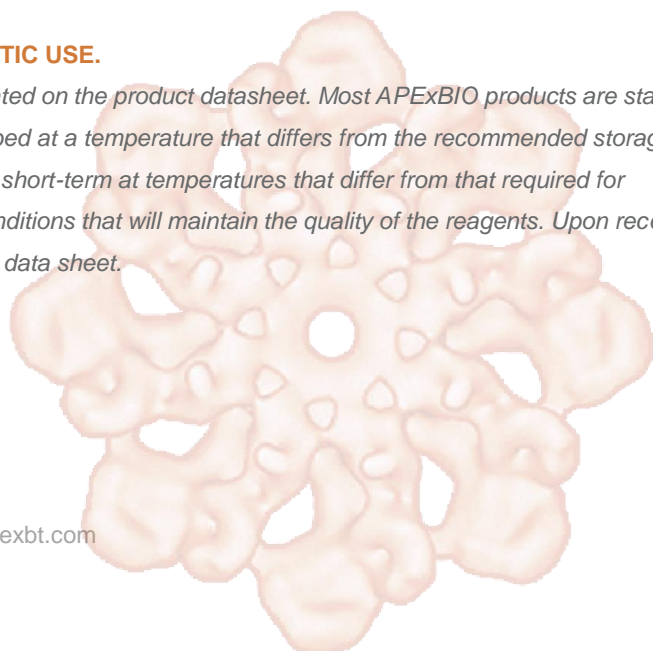
[1]. Wang H, Zhang S, Zhong J, et al. The proteasome inhibitor lactacystin exerts its therapeutic effects on glioma via apoptosis: An in vitro and in vivo study. Journal of International Medical Research, 2013, 41(1): 72-81.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEXBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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