



LKT Laboratories, Inc.

## Patulin

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### Product Information

Product ID P0278

CAS No. 149-29-1

Chemical Name 4-Hydroxy-4H-furo[3,2-c]pyran-2(6H)-one

Synonym Clavacin, clavatin, penicidin

Formula  $C_7H_6O_4$

Formula Wt. 154.12

Melting Point 109-111 °C

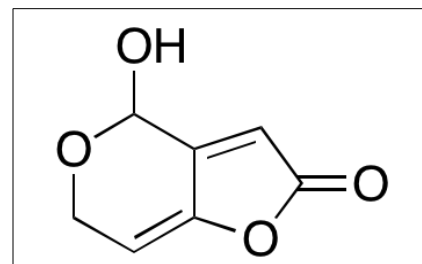
Purity ≥98%

Solubility acetonitrile, ethanol,  
acetone, ethyl acetate, also  
soluble in water

Store Temp 4 °C

Ship Temp Ambient

**Description** Patulin is a mycotoxin initially produced by species of *Penicillium* and *Aspergillus* that is commonly found as a contaminant in apples and apple products. In keratinocytes, patulin increases phosphorylation of EGFR, activates Ras/MAPK/Akt signaling, activates NF-κB, and increases expression of cyclin D1 and COX-2, increasing cell proliferation. Patulin exhibits genotoxic and anticancer activities in a variety of cellular models. Patulin induces DNA damage through the formation of crosslinks. Patulin also activates cleavage of poly(ADP)-ribose polymerase (PARP), increases phosphorylation of EGR-1, and activates caspase 3, resulting in ROS-dependent apoptosis in colorectal cancer cells and leukemia cells. Additionally, patulin decreases transepithelial resistance, altering intestinal epithelial barrier function; this mechanism involves inactivation of protein tyrosine phosphatase. TEST!!!!!!



### Pricing and Availability

**Bulk quantities available upon request**

Product ID	Size	List Price
P0278	1 mg	\$45.60
P0278	5 mg	\$173.70
P0278	10 mg	\$318.40

**References** Alam S, Pal A, Kumar R, et al. EGFR-mediated Akt and MAPKs signal pathways play a crucial role in patulin-induced cell proliferation in primary murine keratinocytes via modulation of Cyclin D1 and COX-2 expression. *Mol Carcinog*. 2013 Jun 29. [Epub ahead of print]. PMID: 23813870.

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Wu TS, Liao YC, Yu FY, et al. Mechanism of patulin-induced apoptosis in human leukemia cells (HL-60). *Toxicol Lett*. 2008 Dec 15;183(1-3):105-11. PMID: 18992795.

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**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.