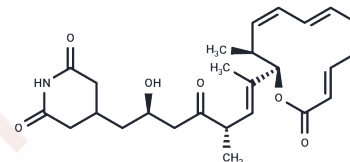


Lactimidomycin

Chemical Properties

CAS No. : 134869-15-1
 Formula: C₂₆H₃₅N₁O₆
 Molecular Weight: 457.56
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
 Actual storage temperature shall be subject to the COA.



Biological Description

Description	Lactimidomycin, isolated from <i>Streptomyces</i> , is an inhibitor of eukaryotic translation elongation. It is also a potent and non-toxic inhibitor of dengue virus 2 and other RNA viruses. Lactimidomycin has an antiproliferative effect on tumor cell lines. It inhibits protein synthesis (IC ₅₀ : 37.82 nM).
Targets(IC ₅₀)	Anti-infection, Others
In vitro	Lactimidomycin is an effective inhibitor of DENV2 and Lactimidomycin's inhibition of DENV2 translation causes reduced production of new infectious particles. Lactimidomycin causes a clear dose-responsive inhibition of DENV2 infectious particle production (EC ₉₀ : 0.4 μM). Lactimidomycin (0.01-100 nM; 24 hours; Hs 579T, HCC 1937, HCC 1395, HCC 2218, BT 474, MCF 7, MDA MB231 cells and MCF 10A) treatment inhibits cell growth with IC ₅₀ concentrations in the low nanomolar range, but higher doses are necessary to inhibit the growth of the non-tumorigenic breast cell line MCF10A[1]. No measurable reduction in cell viability was detected at concentrations up to 12.5 μM. Lactimidomycin may protect cells from viral cytopathic effects including apoptosis, likely through inhibition of virus protein production and replication[2].
In vivo	Lactimidomycin (0.6 mg/kg; intraperitoneal injection; daily; for one month; female nude mice) demonstrates a significant inhibitory effect on tumor growth in nude mice[1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1855 mL	10.9275 mL	21.8551 mL
5 mM	0.4371 mL	2.1855 mL	4.371 mL
10 mM	0.2186 mL	1.0928 mL	2.1855 mL
50 mM	0.0437 mL	0.2186 mL	0.4371 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Schneider-Poetsch T, et al. Inhibition of eukaryotic translation elongation by cycloheximide and lactimidomycin. Nat Chem Biol. 2010 Mar;6(3):209-217.

Carocci M, et al. Lactimidomycin is a broad-spectrum inhibitor of dengue and other RNA viruses. Antiviral Res. 2016 Apr;128:57-62.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481