## Lactimidomycin

MedChemExpress

Cat. No.:	HY-18979		
CAS No.:	134869-15-3	1	
Molecular Formula:	C <sub>26</sub> H <sub>35</sub> NO <sub>6</sub>		
Molecular Weight:	457.56		
Target:	Flavivirus; [	Dengue vi	rus
Pathway:	Anti-infection	on	
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month

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BIOLOGICAL ACTIV		
Description	Lactimidomycin is a glu eukaryotic translation e inhibit protein translatio	tarimide-containing compound isolated from Streptomyces. Lactimidomycin is a potent inhibitor of clongation. Lactimidomycin has a potent antiproliferative effect on tumor cell lines and selectively on. Lactimidomycin inhibits protein synthesis with an IC <sub>50</sub> value of 37.82 nM. Lactimidomycin is also inhibitor of dengue virus 2 and other RNA viruses. Anticancer and antiviral activities <sup>[1][2]</sup> .
IC <sub>50</sub> & Target	Eukaryotic translation e Dengue virus 2 and othe	
In Vitro	10A) treatment inhibits inhibit growth of the no Lactimidomycin induce μM. No measurable dec Lactimidomycin is a pot production of newly infe likely through inhibition	00 nM; 24 hours; Hs 579T, HCC 1937, HCC 1395, HCC 2218, BT 474, MCF 7, MDA MB231 cells and MCF cell growth with $IC_{50}$ concentrations in the low nanomolar range, but higher doses are necessary to n-tumorigenic breast cell line MCF10A <sup>[1]</sup> . s a clear dose-responsive inhibition of DENV2 infectious particle production with an $EC_{90}$ value of 0.4 rease in cell viability was detected at concentrations up to $12.5 \mu$ M <sup>[2]</sup> . tent inhibitor of DENV2 and Lactimidomycin's inhibition of DENV2 translation leads to reduced ectious particles. Lactimidomycin may protect cells from viral cytopathic effects including apoptosis, n of virus protein production and replication <sup>[2]</sup> . ntly confirmed the accuracy of these methods. They are for reference only.
	Cell Line:	Hs 579T, HCC 1937, HCC 1395, HCC 2218, BT 474, MCF 7, MDA MB231 cells and MCF 10A
	Concentration:	0.01-100 nM
	Incubation Time:	24 hours
	Result:	Inhibited cell growth with $\mathrm{IC}_{50}$ concentrations in the low nanomolar range.
In Vivo	effect on tumor growth	g/kg; intraperitoneal injection; daily; for one month; female nude mice) treatment has an appreciable in nude mice <sup>[1]</sup> . ntly confirmed the accuracy of these methods. They are for reference only.
	Animal Model:	Female nude mice (6-8 week old) with MDA MB 231 cells <sup>[1]</sup>

Dosage:	0.6 mg/kg
Administration:	Intraperitoneal injection; daily; for one month
Result:	Had an appreciable effect on tumor growth in vivo.

## CUSTOMER VALIDATION

• J Biol Chem. 2022 Oct 20;102629.

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## REFERENCES

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

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

Caution: Product has not been fully validated for medical applications. For research use only.

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