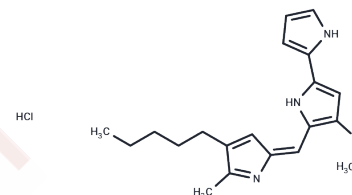


Prodigiosin hydrochloride

Chemical Properties

CAS No. :	56144-17-3
Formula:	C ₂₀ H ₂₆ ClN ₃ O
Molecular Weight:	359.9
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	Prodigiosin hydrochloride, a red pigment, is a bioactive secondary metabolite produced by bacteria. It exhibits potent proapoptotic activity and functions as an inhibitor of the Wnt/ β -catenin pathway. Additionally, this compound possesses antibacterial, antifungal, antiprotozoal, antimalarial, immunosuppressive, and anticancer properties.
Targets(IC50)	Apoptosis,Others,Antibacterial,Parasite,Antifungal,Wnt/beta-catenin
In vitro	Treatment with Prodigiosin (25-500 nM) for 24 hours significantly reduces the viability and proliferation of breast cancer cells, specifically demonstrating IC ₅₀ values of 62.52 nM in MDA-MB-231 cells and 261.2 nM in MDA-MB-468 cells after 48 hours. Furthermore, this treatment markedly diminishes the levels of crucial components in the Wnt signaling pathway, namely phosphorylated LRP6, DVL2, active and total β -catenin in cell line studies, while also enhancing GSK3 β activity through reduced phosphorylation at Ser9 in HEK293T cells. These effects suggest a potent inhibition of cell proliferation and induction of apoptosis in breast cancer cells, as well as a dose-dependent blockage of Wnt signaling stimulated by various Wnt factors in transfected HEK293T cells. Additionally, Prodigiosin exhibits significant antifungal activity against chytrid fungi, Batrachochytrium dendrobatidis, and B. salamandrivorans, with MIC values of 10 μ M and 50 μ M, respectively. These findings underscore Prodigiosin's broad biological activity, including its ability to inhibit Wnt signaling and its potential therapeutic applications in cancer and fungal infections.
In vivo	Prodigiosin (5 mg/kg; intraperitoneal injection; twice weekly; for 3 weeks) significantly inhibits tumor growth by reducing tumor cell density and decreasing Ki-67 expression in female BALB/c nude mice injected with MDA-MB-231 cells[1], resulting in marked tumor growth inhibition.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7785 mL	13.8927 mL	27.7855 mL
5 mM	0.5557 mL	2.7785 mL	5.5571 mL
10 mM	0.2779 mL	1.3893 mL	2.7785 mL
50 mM	0.0556 mL	0.2779 mL	0.5557 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

Wang Z, et al. Prodigiosin inhibits Wnt/ β -catenin signaling and exerts anticancer activity in breast cancer cells. Proc Natl Acad Sci U S A. 2016 Nov 15;113(46):13150-13155.

Woodhams DC, et al. Prodigiosin, Violacein, and Volatile Organic Compounds Produced by Widespread Cutaneous Bacteria of Amphibians Can Inhibit Two Batrachochytrium Fungal Pathogens. Microb Ecol. 2018 May;75(4):1049-1062.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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