

Primaquine

Chemical Properties

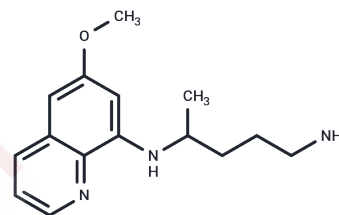
CAS No. : 90-34-6

Formula: C₁₅H₂₁N₃O

Molecular Weight: 259.35

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	Primaquine is an antimalarial compound and a gametocytocide, clearing liver schizonts and dormant forms of Plasmodium vivax.
Targets(IC50)	Parasite
In vitro	<p>Methods: MDA-MB-231, HCC1937, MCF-7 and MDA-MB-453 cells were treated with Primaquine (5 μM, 10 μM, 20 μM, 40 μM, 80 μM, 100 μM, 120 μM and 150 μM for 24 hours) following the CellTiter 96® Aqueous One Solution Cell Kit protocol and the absorbance was read at 490 nm using SpectraMax.</p> <p>Results: Primaquine inhibited breast cancer cells with an IC50 value of 81.2 μM and had no inhibitory effect on the proliferation of MCF-7 (ER+) and MDA-MB-453 (HER2+) cells. [1]</p>
In vivo	<p>Methods: Twelve 4-week-old nude mice were injected with MDA-MB-231 cells and treated with Primaquine (2 mg/kg). Tumor volume was measured every 10 days after 90 days using the formula.</p> <p>Results: Primaquine inhibited tumor growth in a xenograft mouse model. [1]</p>

Solubility Information

Solubility	DMSO: 257.5 mg/mL (992.87 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8558 mL	19.279 mL	38.5579 mL
5 mM	0.7712 mL	3.8558 mL	7.7116 mL
10 mM	0.3856 mL	1.9279 mL	3.8558 mL
50 mM	0.0771 mL	0.3856 mL	0.7712 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

Kim JH, et al. Primaquine Inhibits the Endosomal Trafficking and Nuclear Localization of EGFR and Induces the Apoptosis of Breast Cancer Cells by Nuclear EGFR/Stat3-Mediated c-Myc Downregulation. *Int J Mol Sci.* 2021 Nov 30;22(23):12961.

Ma M, Li X, Jing M, et al. Enhanced Tumor-Targeted Delivery of Arginine-Rich Peptides via a Positive Feedback Loop Orchestrated by Piezo1/integrin β 1 Signaling Axis. *Advanced Science.* 2024: 2409081.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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