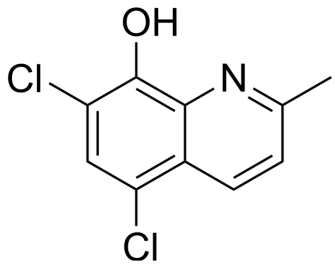
Chlorquinaldol

Cat. No.:	HY-B1360
CAS No.:	72-80-0
Molecular Formula:	$C_{10}H_7Cl_2NO$
Molecular Weight:	228.07
Target:	Antibiotic; Bacterial; Fungal; β-catenin; Apoptosis
Pathway:	Anti-infection; Stem Cell/Wnt; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (219.23 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	4.3846 mL	21.9231 mL	43.8462 mL
	5 mM	0.8769 mL	4.3846 mL	8.7692 mL
	10 mM	0.4385 mL	2.1923 mL	4.3846 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (9.12 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (9.12 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Chlorquinaldol (Chloquinan) is an antibacterial agent with the potential use in topical skin conditions and vaginal infections. Chlorquinaldol is a β-catenin/TCF4 inhibitor, showing anti-proliferation, anti-migration, and apoptosis-inducing activity in cancer cells[1][2].

In Vitro

Chlorquinaldol (Chloquinan; 5, 10 μM; 24 h) inhibits Wnt/β-catenin signaling by disrupting β-catenin/TCF4 complex in colorectal cancer (CRC) cell[2].
Chlorquinaldol (5, 10 μM; 24 h) inhibits β-catenin acetylation in CRC cells, thereby reducing the interaction of β-catenin with TCF4[2].
Chlorquinaldol (0.5, 1, 2 μM; 24 h) inhibits the stemness of CRC cells and exerts anti-CRC activity in vitro and in vivo[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR[2]	
Cell Line:	SW480, HCT116, HT29 and DLD1 cells
Concentration:	5, 10 μM
Incubation Time:	24 h
Result:	Decreased the mRNA levels of these target genes in all four CRC cell lines in a dose-dependent manner.

CUSTOMER VALIDATION

- Clin Transl Med. 2023 Jun;13(6):e1300.
- Front Microbiol. 2017 Jun 8;8:1039.
- Infect Drug Resist. 2019 Jul 19;12:2177-2189.

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REFERENCES

[1]. Bortolin M, et al. In vitro Antimicrobial Activity of Chlorquinaldol against Microorganisms Responsible for Skin and Soft Tissue Infections: Comparative Evaluation with Gentamicin and Fusidic Acid. Front Microbiol. 2017 Jun 8;8:1039.

[2]. Wang L, et al. Chlorquinaldol targets the β-catenin and T-cell factor 4 complex and exerts anti-colorectal cancer activity. Pharmacol Res. 2020 Sep;159:104955.

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