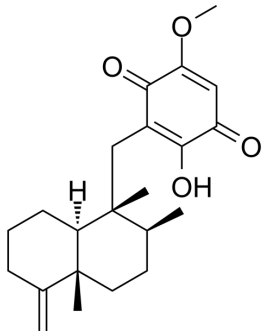
Ilimaquinone

Cat. No.:	HY-119500
CAS No.:	71678-03-0
Molecular Formula:	$C_{22}H_{30}O_4$
Molecular Weight:	358
Target:	HIV; Bacterial
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description

Ilimaquinone, a marine sponge metabolite, displays anticancer activity via GADD153-mediated pathway. Ilimaquinone can induce vesiculation of the Golgi apparatus[1]. Ilimaquinone exerts anti-HIV, anti-microbial, anti-inflammatory, and effects[2].

In Vitro

Ilimaquinone induces a concentration-dependent anti-proliferative effect in several types of cancer cell lines, including prostate cancer PC-3 and LNCaP, non-small cell lung cancer A549 and hepatocellular carcinoma Hep3B cells. Ilimaquinone (0.3-30 μM; 48 hours) inhibits the proliferation of PC-3 cells, DU145, LNCaP, MG63, A549, Hep3B cells with GI_{50}s of 2.6 μM, 5.8, 4.6, 4.9, 4.1, 12.0μM, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Prostate cancer PC-3 cells
Concentration:	0.3, 1, 3, 10, and 30 μM
Incubation Time:	48 hours
Result:	Inhibited the proliferation of PC-3 cells in a concentration-dependent manner.

In Vivo

Ilimaquinone exhibits terminal elimination half-lives ($T_{1/2}$=1.2±0.3 h) due to high plasma clearance (2.95±0.53 L/h/kg) following oral administration (10 mg/kg) in male Sprague-Dawley rats[2].

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REFERENCES

[1]. Pin-Hsuan Lu, et al. Ilimaquinone, a Marine Sponge Metabolite, Displays Anticancer Activity via GADD153-mediated Pathway. Eur J Pharmacol. 2007 Feb 5;556(1-3):45-54.

[2]. Heebin Son, et al. Stereo-Selective Pharmacokinetics of Ilimaquinone Epimers Extracted From a Marine Sponge in Rats. Mar Drugs. 2019 Mar 17;17(3):171.

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

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