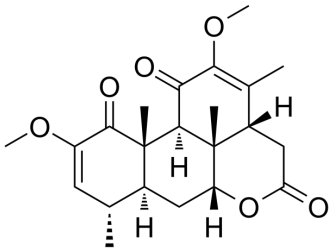
Quassin

Cat. No.:	HY-N1581
CAS No.:	76-78-8
Molecular Formula:	$C_{22}H_{28}O_6$
Molecular Weight:	388.45
Target:	Parasite
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Quassin (Nigakilactone D) is a bioactive triterpenoid from stem bark extract of Quassia amara. Quassin inhibits ***P. falciparum*** with an IC_{50} of 0.15 μM. Quassin possesses reversible antifertility, anti-estrogenic and anti-plasmodial activity[1][2].
IC_{50} & Target	IC50: 0.15 μM (P. falciparum)[2]
In Vitro	Quassin (Compound 1; 5-25 ng/mL) inhibits both the basal and luteinizing hormone-stimulated testosterone secretion of rat Leydig cells in a dose-dependent fashion[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Quassin (0.1-2.0 mg/kg; oral administration; daily; for 60 days; females albino rats) treatment shows a significant decrease in the weight of the ovary and uterus. And also shows a significant decrease in serum estrogen levels in quassin treated rats. The Quassin treated rats has a significantly decreased mean litter number and weight. Quassin does not adversely affect the weight of the kidney, heart, liver and the body of the rats[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	35 females albino rats (150-170 g)[1]
Dosage:	0.1 mg/kg, 1.0 mg/kg and 2.0 mg/kg
Administration:	Oral administration; daily; for 60 days
Result:	There was a significant decrease in the weight of the ovary and uterus in all the groups relative to the control. There was also a significant decrease in serum estrogen levels in quassin treated rats.

REFERENCES

[1]. Raji Y, et al. Reproductive activities of female albino rats treated with quassin, a bioactive triterpenoid from stem bark extract of Quassia amara. Niger J Physiol Sci. 2010 Nov 24;25(2):95-102.

[2]. Mishra K, et al. Plasmodium falciparum: in vitro interaction of quassin and neo-quassin with artesunate, a hemisuccinate derivative of artemisinin. Exp Parasitol. 2010 Apr;124(4):421-7.

[3]. Njar VC, et al. Antifertility activity of Quassia amara: quassin inhibits the steroidogenesis in rat Leydig cells in vitro. Planta Med. 1995 Apr;61(2):180-2.

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