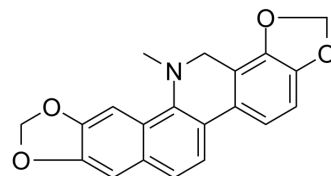


Dihydrosanguinarine

Cat. No.:	HY-N0902		
CAS No.:	3606-45-9		
Molecular Formula:	C ₂₀ H ₁₅ NO ₄		
Molecular Weight:	333.34		
Target:	Fungal		
Pathway:	Anti-infection		
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 : 5.2 mg/mL (15.60 mM; Need ultrasonic and warming)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.9999 mL	14.9997 mL	29.9994 mL
	5 mM	0.6000 mL	2.9999 mL	5.9999 mL
	10 mM	0.3000 mL	1.5000 mL	2.9999 mL

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

BIOLOGICAL ACTIVITY

Description

Dihydrosanguinarine is a natural compound isolated from the leaves of *Macleaya microcarpa*; has antifungal and anticancer activity. IC₅₀ value: Target: in vitro: Dihydrosanguinarine showed much less cytotoxicity than sanguinarine: at the highest concentration tested (20 microM) and 24h exposure, dihydrosanguinarine decreased viability only to 52% [1]. Dihydrosanguinarine showed the highest antifungal activity against *B. cinerea* Pers, with 95.16% mycelial growth inhibition at 50 µg/ml [2]. dihydrosanguinarine showed the most potent leishmanicidal activities (IC₅₀) value: 0.014 microg/ml, respectively) [4]. in vivo: Repeated dosing of DHSG for 90 days at up to 500 ppm in the diet (i.e. approximately 58 mg/kg/day) showed no evidence of toxicity in contrast to results published in the literature [3].

REFERENCES

- [1]. Vrba J, et al. Cytotoxic activity of sanguinarine and dihydrosanguinarine in human promyelocytic leukemia HL-60 cells. *Toxicol In Vitro*. 2009 Jun;23(4):580-8.
- [2]. Feng G, et al. Inhibitory activity of dihydrosanguinarine and dihydrochelerythrine against phytopathogenic fungi. *Nat Prod Res*. 2011 Jul;25(11):1082-9.
- [3]. Vrublova E, et al. The toxicity and pharmacokinetics of dihydrosanguinarine in rat: a pilot study. *Food Chem Toxicol*. 2008 Jul;46(7):2546-53.

[4]. Fuchino H, et al. In vitro leishmanicidal activity of benzophenanthridine alkaloids from *Bocconia pearcei* and related compounds. *Chem Pharm Bull (Tokyo)*. 2010 Aug;58(8):1047-50.

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

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