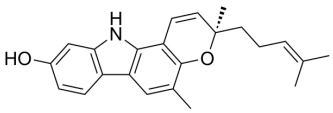
Mahanine

Cat. No.:	HY-121368
CAS No.:	28360-49-8
Molecular Formula:	$C_{23}H_{25}NO_2$
Molecular Weight:	347.45
Target:	Parasite
Pathway:	Anti-infection
Storage:	-20°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Mahanine is a carbazole alkaloid with various biological properties. Mahanine is a potent anticancer agent against different types of cancer cells. Mahanine exhibits antileishmanial activity and can be used for Leishmania infection research research.
IC_{50} & Target	Leishmania
In Vitro	Mahanine (0-50 μM; 24 or 48 hours) induces a dose-dependent decrease in cell viability of AG83 promastigotes after 24 hr and 48 hr; the IC_{50} values were 16.7±1.7 μM and 11.5±0.8 μM respectively. In a drug resistant GE1 strain, Mahanine treatment exhibits dose-dependent cell death in 24 and 48 hr treatment with IC_{50} values 40.3±2.2 μM and 29.1±1.3 μM respectively[1]. Mahanine (5.0 and 10 μM; 24 hours) exhibits increased accumulation of cells at G2/M phase being 39.0±1.90% and 41.0±2.10% respectively compared to untreated promastigotes (35.3 ± 2.60%) in AG83 promastigote [1]. Mahanine (25 μM; 24 hours) exhibitssignificantly increased intracellular ROS level within 20 min (MFI being 889 ± 26) which reached to 1288 ± 56 after one hour compared to the basal level (604 ± 34) in untreated promastigote. H2DCFDA positivity was measured by FACS[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Mahanine (oral gavage; 20 mg/kg/40 mg/kg; b.w/day; 5 days) results in 89.1±4.1% reductions in parasite burden at 20 mg/kg, and leads to 96.2±0.3% reductions in parasite burden at 40 mg/kg in a well-established acute model to control Leishmania infection[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Balb/c mice with virulent AG83 promastigotes[1]
Dosage:	20 mg/kg-40 mg/kg
Administration:	oral gavage; 20 mg/kg/40 mg/kg; b.w/day; 5 days
Result:	Had the potential to clear parasite burden in vivo. Exhibited almost complete reduction of parasite burden, upregulation of NO/iNOS/ROS/IL-12 and T cell proliferation in vivo.

REFERENCES

[1]. Kaushik Bhattacharya, et al. Apoptotic effects of mahanine on human leukemic cells are mediated through crosstalk between Apo-1/Fas signaling and the Bid protein and via mitochondrial pathways. Biochem Pharmacol. 2010 Feb 1;79(3):361-72.

[2]. Saptarshi Roy, et al. Mahanine exerts in vitro and in vivo antileishmanial activity by modulation of redox homeostasis. Sci Rep

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA