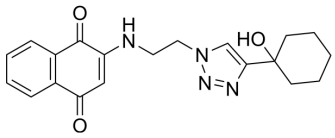
Antimalarial agent 26

Cat. No.:	HY-149939
CAS No.:	2299199-56-5
Molecular Formula:	$C_{20}H_{22}N_4O_3$
Molecular Weight:	366.41
Target:	Parasite
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Antimalarial agent 26 is an orally active 1,4-naphthoquinones derivative with antimalarial activities. Antimalarial agent 26 shows cytotoxicity against P. falciparum and selectivity over mammalian cell lines. Antimalarial agent 26 inhibits P. burghei induced parasitemia in vivo[1].
In Vitro	Antimalarial agent 26 (compound 11) inhibits P. falciparum with IC_{50} of 2.7 μM, while shows CC_{50} on mammalian cells with CC_{50}s of 440.9 μM (HepG2), and 1336 μM (Vero), respectively[1]. Antimalarial agent 26 (1000 to 15.62 μM; 2 h) shows hemolytic activity below 40% at concentrations from 250 to 15.6 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Antimalarial agent 26 (compound 11) (30 mg/kg; po; once daily for 4 consecutive days) shows antimalarial activity in female albino swiss mice[1]. Antimalarial agent 26 (300 mg/kg; po; single dose) shows pathological lesions of hepatocellular damage in female mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female albino swiss mice[1]
Dosage:	300 mg/kg
Administration:	PO; single dose
Result:	Presented necrosis of hepatocytes in moderate to severe degrees, acidophilic cytoplasm with macro vacuoles and micro steatosis, granular degeneration and congestion of the lobular center vein and hepatic portal vein. In the kidney, Resulted an atrophic glomerulus was observed with congested capillaries, reduction of mesangial cells and podocytes with discrete thickening of the basal membrane.

REFERENCES

[1]. Costa Souza RM, et al. Biological activity of 1,2,3-triazole-2-amino-1,4-naphthoquinone derivatives and their evaluation as therapeutic strategy for malaria control. Eur J Med Chem. 2023 Jul 5;255:115400.

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

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