UCB7362

Cat. No.: HY-151568

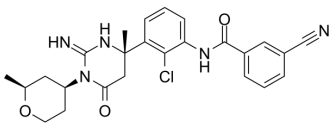
Molecular Formula: $C_{25}H_{26}ClN_5O_3$

Molecular Weight: 479.96

Target: Parasite

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	UCB7362 is an orally active and potent antimalarial plasmepsin X (PMX) inhibitor, with an IC_{50} of 7 nM. UCB7362 inhibits parasite growth[1].
IC_{50} & Target	Plasmodium
In Vitro	UCB7362 is substantially more potent against PMX than PMIX with an IC_{50} of 7 nM for the former compared to 142 nM for the latter[1]. UCB7362 also demonstrates an improvement in selectivity against Cat D and Renin with an IC_{50} of 3889 nM and >10,000 nM, respectively[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	UCB7362 (10-60 mg/kg, Oral administration, twice a day, for 4 days) clears parasitemia from peripheral blood[1]. UCB7362 (IV (1 mg/kg), PO (10 mg/kg); once) shows moderate clearance in dog and cynomolgus monkey and moderate-high in rat[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Pf (Plasmodium falciparum) SCID mouse model[1]
Dosage:	10, 25 and 60 mg/kg
Administration:	Oral administration, twice a day, for 4 days, with the second administration 10 h after the first one
Result:	Cleared parasitemia from peripheral blood in a dose-dependent manner.

Animal Model:	Sprague Dawley rat[1]
Dosage:	1 mg/kg, 10 mg/kg
Administration:	IV (1 mg/kg), PO (10 mg/kg); once (Pharmacokinetic Analysis)
Result:	Pharmacokinetic Parameters of UCB7362 in Sprague-Dawley rats[1].

	IV (1 mg/kg)	PO (10 mg/kg)
CL (mL/(min kg))	43.9	
Vss (L/kg)	5.72	
T_{max} (h)		3
C_{max} (nM)		246
AUC_{0-24} (nM⊠h)	793	1410
$t_{1/2}$ (h)	2.1	
F (%)		11

REFERENCES

[1]. Lowe MA, et al. Discovery and Characterization of Potent, Efficacious, Orally Available Antimalarial Plasmepsin X Inhibitors and Preclinical Safety Assessment of UCB7362. J Med Chem. 2022 Oct 10.

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