Antiparasitic agent-9

Cat. No.: HY-151133

CAS No.: 2516237-50-4

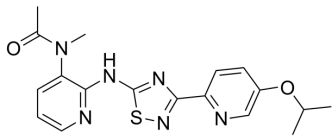
Molecular Formula: $C_{18}H_{20}N_6O_2S$

Molecular Weight: 384.46

Target: Parasite

Pathway: Anti-infection

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



BIOLOGICAL ACTIVITY

Description

Antiparasitic agent-9 (compound 47) is an orally active and potent antiparasitic agent. Antiparasitic agent-9 shows antiparasitic activity against the human parasite[1].

IC_{50} & Target

Mite

In Vivo

Antiparasitic agent-9 (compound 47) (15 mg/kg, Orally, twice each day for 7 days) reduces adult worm burden in the jird L. sigmodontis infection model[1].

Antiparasitic agent-9 (2 mg/kg (IV), 10 and 30 mg/kg (PO); once) shows a brain to plasma ratio of 0.08, suggesting limited brain exposure[1].

Pharmacokinetic Parameters of Antiparasitic agent-9 in male Male CD-1 mouse[1].

	PO (30 mg/kg)	PO (10 mg/kg)	IV (2 mg/kg)
C_{max} (μM)	13.9	5.27 ± 0.83	
T_{max} (h)	0.50	4.0 ± 2.8	
$AUC_{0\text{-}inf}$ (μM·h)	121	68.1±NC	
CL (mL/min/kg)			3.6 ± 0.22
Vd ss (mL/kg)			0.74 ± 0.08
F (%)		57	
brain/plasma [b]/[p]	0.08		
efflux ratio (ER)	12		

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female BALB/c mice (infected withL. sigmodontis, 6-8 weeks)[1]
Dosage:	15 mg/kg
Administration:	Orally, twice each day for 7 days
Result:	Showed a significant worm burden reduction of 59% at 15 mg/kg.

Animal Model:	Male CD-1 mouse (n = 4)[1]
Dosage:	2 mg/kg (IV), 10 and 30 mg/kg (PO)
Administration:	IV, PO, once (Pharmacokinetic Analysis)
Result:	Showed a brain to plasma ratio of 0.08, suggesting limited brain exposure.

REFERENCES

[1]. Hawryluk N, et al. Discovery of Substituted Di(pyridin-2-yl)-1,2,4-thiadiazol-5-amines as Novel Macrofilaricidal Compounds for the Treatment of Human Filarial Infections. J Med Chem. 2022 Aug 16.

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