Pyrantel

Cat. No.: HY-12641A

CAS No.: 15686-83-6

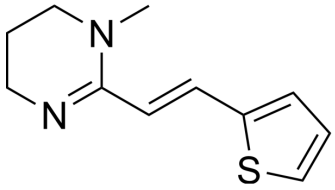
Molecular Formula: $C_{11}H_{14}N_2S$

Molecular Weight: 206.31

Target: nAChR; Parasite; Antibiotic

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Anti-infection

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



BIOLOGICAL ACTIVITY

Description

Pyrantel is an orally active anthelmintic and an agonist of the nicotinic acetylcholine receptor (nAChR). Pyrantel can cause spasmodic muscle paralysis in parasites. Pyrantel can be used in the study of parasitic infections such as ascariasis, hookworm infections, intestinal worms (pinworm infections), trichinosis and trichinosis[1][2].

IC_{50} & Target

Parasites[1][2].

In Vitro

Pyrantel (10 nM-10 μM; 72 h) shows good anti-A. suum and (0-168.2 M; 72 h) anti-N. americanus activity[1][2].

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

Cell Viability Assay[1]

Cell Line:	A. suum
Concentration:	10 nM-10 μM
Incubation Time:	72 h
Result:	Inhibited A. suum with a pEC_{50} value of 7.24.

Cell Viability Assay[2]

Cell Line:	N. americanus
Concentration:	0-168.2 M (0-100 μg/mL)
Incubation Time:	72 h
Result:	Inhibited third-stage larvae and adult of N. americanus with IC_{50} values of 2.0 and 7.6 mg/mL, respectively.

In Vivo

Pyrantel (10 mg/kg; p.o.; single) reduces the worms in A. ceylanicum-infected hamsters, with the worm burden reduction of 87.2% and worm expulsion rate of 63.4%[2].

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

Animal Model:	Male Syrian Golden hamsters (3-week-old; A. ceylanicum-infected)[2].
Dosage:	10 mg/kg
Administration:	Oral administration; single.
Result:	Exhibited worm burden reduction and worm expulsion rates of 87.2% and 63.4%, respectively.

REFERENCES

[1]. Martin RJ, et al. Oxantel is an N-type (methyridine and nicotine) agonist not an L-type (levamisole and pyrantel) agonist: classification of cholinergic anthelmintics in Ascaris. Int J Parasitol. 2004 Aug;34(9):1083-90.

[2]. Tritten L, et al. In vitro and in vivo efficacy of Monepantel (AAD 1566) against laboratory models of human intestinal nematode infections. PLoS Negl Trop Dis. 2011 Dec;5(12):e1457.

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