

Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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Zuschläge

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Data Sheet (Cat.No.T4269)

TargetM**Ò**I

Buparvaquone

Chemical Proper	ties	
CAS No. :	88426-33-9	
Formula:	C21H26O3	II)
Molecular Weight:	326.43	
Appearance:	no data available	$\left\langle \right\rangle$
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year	H ₃ C CH ₃ CH ₃

Biological Description

Description	Buparvaquone (BW 720C) is a hydroxynaphthoquinone antiprotozoal drug related to atovaquone and parvaquone.
Targets(IC50)	Antibiotic,Parasite
In vitro	Buparvaquone is significantly selective against L. (L.) infantum chagasi intracellular amastigotes, with an IC50 value of 1.5 μ M. In 4-day proliferation assays, buparvaquone efficiently inhibits N.?caninum tachyzoite replication(IC50=4.9?nM; IC100=100?nM). Other cutaneous species are also susceptible to buparvaquone, with IC50 values in the range 1-4 μ M.
In vivo	Both a hydrous gel and a water-in-oil emulsion containing buparvaquone markedly decrease the cutaneous parasite load and lesion size compared to the untreated control. Administering buparvaquone (100 mg/kg) to N. caninum-infected mice, either through intraperitoneal injection or orally via gavage, effectively prevents neosporosis symptoms in a significant proportion of the subjects. Specifically, symptoms were prevented in four out of six mice in the group treated intraperitoneally and in six out of seven mice receiving oral treatment.
Cell Research	To study whether pretreatment of host cells prior to invasion had any effect on parasite proliferation, confluent HFF grown in 6-well plates are treated with 1?µM buparvaquone in medium for 1?h or 5?h, and controls are exposed to the corresponding amounts of DMSO. Subsequently, the drug-containing medium is removed and monolayers are ished 4 times with Hank's Balanced Salt Solution, and are infected with Nc-Liv tachyzoites in 5?mL medium without any drug or solvent. After 2 days, cells are collected with a cell scraper, centrifuged, ished once more in PBS, and the pellet is stored at ?20?° C prior to quantification of N.?caninum proliferation by N.?caninum-specific real time PCR as outlined below.
Animal Research	Mice: On day 0, all mice are infected by intraperitoneal (i.p.) injection of freshly purified N.?caninum tachyzoites. After 48?h, mice receive BPQ (100?mg/kg) as suspension in corn oil either by i.p. injection of a volume of 100?µl or by oral application of 100?µl by gavage. The control groups obtained the corresponding amount of the solvent only, either i.p. or orally. The treatments are performed 5 times on a daily basis. If not indicated otherwise, mice are inspected twice daily for clinical signs (ruffled coat, apathy, hind limb paralysis) until day 21 post infection (p.i.), at which time they are euthanized.

A DRUG SCREENING EXPERT

Solubility Information

Solubility	DMSO: 3.26 mg/mL (10 mM),Sonication is recommended.
	(< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0634 mL	15.3172 mL	30.6344 mL
5 mM	0.6127 mL	3.0634 mL	6.1269 mL
10 mM	0.3063 mL	1.5317 mL	3.0634 mL
50 mM	0.0613 mL	0.3063 mL	0.6127 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Müller J, et al. Buparvaquone is active against Neospora caninum in vitro and in experimentally infected mice. Int J Parasitol Drugs Drug Resist. 2015 Feb 13;5(1):16-25.

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