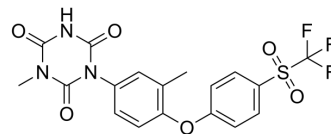


Toltrazuril (sulfone)

Cat. No.:	HY-17008		
CAS No.:	69004-04-2		
Molecular Formula:	C ₁₈ H ₁₄ F ₃ N ₃ O ₆ S		
Molecular Weight:	457.38		
Target:	Parasite		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (109.32 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.1864 mL	10.9318 mL	21.8637 mL
	5 mM	0.4373 mL	2.1864 mL	4.3727 mL
	10 mM	0.2186 mL	1.0932 mL	2.1864 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (5.47 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.47 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (5.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Toltrazuril sulfone (Ponazuril) is a metabolite of Toltrazuril (HY-B0175), with antiprotozoal activity. Toltrazuril sulfone is a triazine anticoccidial that is developed to prevent coccidiosis in poultry^{[1][2]}.

IC₅₀ & Target

Coccidia

In Vitro

Toltrazuril sulfone inhibits the development of merozoites of *S. neurona*^[1].
Toltrazuril sulfone inhibits the development of *N. caninum* after approximately 48 h post-exposure^[1].

Toltrazuril sulfone exhibits inhibitory possibly by targeting different enzyme/enzyme systems in different apicomplexans^[1]. Toltrazuril sulfone (5 mg/ml; 20 hours) inhibits *T. gondii* replication after the second division by endodyogeny^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Toltrazuril sulfone (10-20 mg/kg; p.o.; daily; for 10 days) is effective in preventing and treating toxoplasmosis in mice^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female CD-1 mice ^[2]
Dosage:	10 mg/kg, 20 mg/kg
Administration:	Oral administration, daily, for 10 days
Result:	Prevented and protected mice from toxoplasmosis.

REFERENCES

[1]. Sheila M Mitchell, et al. The effects of ponazuril on development of apicomplexans in vitro. *J Eukaryot Microbiol.* May-Jun 2005;52(3):231-5.

[2]. Sheila M Mitchell, et al. Efficacy of ponazuril in vitro and in preventing and treating *Toxoplasma gondii* infections in mice. *J Parasitol.* 2004 Jun;90(3):639-42.

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

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