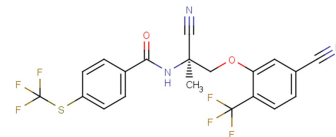


Monepantel

Chemical Properties

CAS No.:	887148-69-8
Formula:	C ₂₀ H ₁₃ F ₆ N ₃ O ₂ S
Molecular Weight:	473.39
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Monepantel is an organic anthelmintic. Monepantel is also used for a positive allosteric modulator of a nematode-specific clade of nicotinic acetylcholine receptor (nAChR) subunits.
Targets(IC ₅₀)	Others: None
In vitro	Monepantel (0, 10 and 25 μM) decreases autophagosome formation in these cancer cell lines. Monepantel also decreases the expression of phosphorylated Raptor at Ser792, which is one of the mTORC1 coMonepantellex members[2]. Monepantel (0, 10 and 25 μM) shows a markedly reduced level of punctate staining indicating the suppression of phosphorylated mTOR at Ser2448. Monepantel (250 μg/mL) leads multiple ABC transporter genes higher transcription in both worm isolates. The metallocenyl analogues of monepantel displays nematocidal activity[1]. Monepantel (25 μM) induces the accumulation of acidic vacuoles. Ovarian cancer cell lines are highly sensitive to Monepantel (IC ₅₀ : 7.2±0.2 μM (OVCAR-3) and 10.5±0.4 μM (A2780)). Larvae exposed to monepantel at 250 μg/mL shows an increased efflux of rhodamine-123. A proportion of the larval population shows an ability to subsequently tolerate higher concentrations of IVM in migration assays[3].
In vivo	Monepantel (10 μM) obviously enhanced all CYP-related activities and CYP3A24 mRNA in sheep[4].

Solubility Information

Solubility	DMSO: 100 mg/mL (211.24 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.112 mL	10.562 mL	21.124 mL
5 mM	0.422 mL	2.112 mL	4.225 mL
10 mM	0.211 mL	1.056 mL	2.112 mL
50 mM	0.042 mL	0.211 mL	0.422 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Hess J, et al. Assessment of the nematocidal activity of metallocenyl analogues of monepantel. Dalton Trans. 2016 Nov 28;45(44):17662-17671.
2. Bahrami F, et al. Monepantel induces autophagy in human ovarian cancer cells through disruption of the mTOR/p70S6K signalling pathway. Am J Cancer Res. 2014 Sep 6;4(5):558-71.
3. Raza A, et al. Increased expression of ATP binding cassette transporter genes following exposure of Haemonchus contortus larvae to a high concentration of monepantel in vitro. Parasit Vectors. 2016 Sep 29;9(1):522.
4. Stuchlikova, et al. Monepantel induces hepatic cytochromes p450 in sheep in vitro and in vivo. Chem Biol Interact. 2015 Feb 5;227:63-8.

Inhibitors · Natural Compounds · Compound Libraries

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