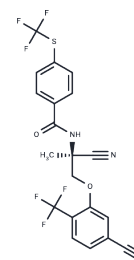


## Monepantel

## Chemical Properties

CAS No. :	887148-69-8
Formula:	C <sub>20</sub> H <sub>13</sub> F <sub>6</sub> N <sub>3</sub> O <sub>2</sub> S
Molecular Weight:	473.39
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Monepantel (AAD1566) is an organic anthelmintic and nicotinic acetylcholine receptor antagonist from roundworms and esophagostomies that is widely used for de-worming in agriculture and livestock.
Targets(IC50)	AChR
In vitro	Monepantel (0, 10, and 25 μM) induces the formation of autophagosomes in cancer cell lines, displaying a significant decrease in punctate staining levels, indicative of inhibition of phosphorylated mTOR at Ser2448[3].
In vivo	Incubating primary cultures of sheep hepatocytes with or without MOP (10μM) for 24 hours significantly enhances all CYP-related activities and CYP3A24 mRNA levels in sheep[4].

## Solubility Information

Solubility	DMSO: 80 mg/mL (168.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (6.97 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.1124 mL	10.5621 mL	21.1242 mL
5 mM	0.4225 mL	2.1124 mL	4.2248 mL
10 mM	0.2112 mL	1.0562 mL	2.1124 mL
50 mM	0.0422 mL	0.2112 mL	0.4225 mL

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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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Hess J, et al. Assessment of the nematocidal activity of metallocenyl analogues of monepantel. Dalton Trans. 2016 Nov 28;45(44):17662-17671.

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.

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.

Stuchlikova, et al. Monepantel induces hepatic cytochromes p450 in sheep in vitro and in vivo. Chem Biol Interact. 2015 Feb 5;227:63-8.

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