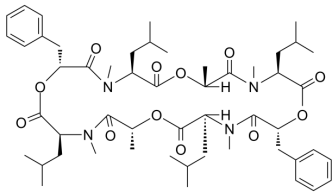
PF 1022A

Cat. No.:	HY-12361
CAS No.:	133413-70-4
Molecular Formula:	$C_{52}H_{76}N_4O_{12}$
Molecular Weight:	949.18
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 : 100 mg/mL (105.35 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.0535 mL	5.2677 mL	10.5354 mL
	5 mM	0.2107 mL	1.0535 mL	2.1071 mL
	10 mM	0.1054 mL	0.5268 mL	1.0535 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.63 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PF 1022A is a cyclooctadepsipeptide with broadspectrum anthelmintic properties produced by fermentation of the fungus Mycelia sterilia. PF 1022A is a channel-forming ionophore. PF 1022A showes strong anthelmintic activities against ***Ascaridia galli*** in chickens. PF 1022A also can be used for angiostrongyliasis research[1][2][3].

In Vitro

PF 1022A binds to the latrophilin-like transmembrane receptor important for pharyngeal pumping in nematodes. Furthermore, PF 1022A binds to GABA receptors, which might contribute to the anthelmintic effect[1].
In vitro, PF 1022A shows low activity on embryonation but significantly inhibits egg hatch (10 and 100 μg/mL), whereas albendazole (10 and 100 μg/mL) reveales statistically significant inhibitions of both embryonation and egg hatch. PF 1022A (1-100 μg/mL) completely inhibits larval movement at most examination points[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biochem Pharmacol. 2018 May;151:79-88.

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REFERENCES

[1]. Sasaki T, et al. A new anthelmintic cyclodepsipeptide, PF1022A. J Antibiot (Tokyo). 1992 May;45(5):692-7.

[2]. Dornetshuber R, et al. Effects of the anthelmintic drug PF1022A on mammalian tissue and cells. Biochem Pharmacol. 2009 Apr 15;77(8):1437-44.

[3]. Nwosu U, et al. Efficacy of the cyclooctadepsipeptide PF1022A against Heligmosomoides bakeri in vitro and in vivo. Parasitology. 2011 Aug;138(9):1193-201.

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