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产品名称: **PF 1022A**  
产品别名: **PF 1022A**

### 生物活性:

#### Description

PF 1022A is a N-methylated cyclooctadepsipeptides (CODPs) with strong anthelmintic properties; acts as an ionophore. IC50 value: Target: PF 1022A showed strong anthelmintic activities against *Ascaridia galli* in chickens [1]. PF1022A is a novel anthelmintic that binds to the latrophilin-like transmembrane receptor important for pharyngeal pumping in nematodes. Furthermore, PF1022A binds to GABA receptors, which might contribute to the anthelmintic effect. Like other cyclodepsipeptides, PF1022A acts as an ionophore [2]. In vitro, PF1022A showed low activity on embryonation but significantly inhibited egg hatch (10 and 100  $\mu\text{g/ml}$ ), whereas albendazole (10 and 100  $\mu\text{g/ml}$ ) revealed statistically significant inhibitions of both embryonation and egg hatch. PF1022A (1-100  $\mu\text{g/ml}$ ) completely inhibited larval movement at most examination points [3].

#### In Vitro:

DMSO :  $\geq 43 \text{ mg/mL}$  (45.30 mM)

\* "≥" means soluble, but saturation unknown.

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

\*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限:  $-80^{\circ}\text{C}$ , 6 months;  $-20^{\circ}\text{C}$ , 1 month。  $-80^{\circ}\text{C}$  储存时，请在 6 个月内使用，  $-20^{\circ}\text{C}$  储存时，请在 1 个月内使用。

#### In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO →90% corn oil

Solubility:  $\geq 2.5 \text{ mg/mL}$  (2.63 mM); Clear solution

此方案可获得  $\geq 2.5 \text{ mg/mL}$  (2.63 mM, 饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

以 1 mL 工作液为例，取 100  $\mu\text{L}$  25.0 mg/mL 的澄清 DMSO 储备液加到 900  $\mu\text{L}$  玉米油中，混合均匀。

#### Solvent&Solubility

[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.



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#### References

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.



# 源叶生物