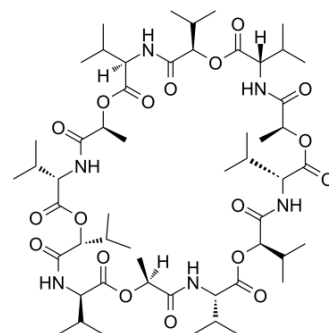


Valinomycin

Cat. No.:	HY-N6693		
CAS No.:	2001-95-8		
Molecular Formula:	C ₅₄ H ₉₀ N ₆ O ₁₈		
Molecular Weight:	1111.32		
Target:	Apoptosis		
Pathway:	Apoptosis		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (44.99 mM; Need ultrasonic)
 Ethanol : 50 mg/mL (44.99 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.8998 mL	4.4992 mL	8.9983 mL
	5 mM	0.1800 mL	0.8998 mL	1.7997 mL
	10 mM	0.0900 mL	0.4499 mL	0.8998 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 (2.25 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% corn oil**
 Solubility: ≥ 2.5 mg/mL (2.25 mM); Clear solution
- Add each solvent one by one: **10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
 Solubility: ≥ 2.5 mg/mL (2.25 mM); Clear solution
- Add each solvent one by one: **10% EtOH >> 90% corn oil**
 Solubility: ≥ 2.5 mg/mL (2.25 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Valinomycin (NSC 122023) is a cyclic depsipeptide antibiotic first isolated from *Streptomyces fulvissimus*, act as a potassium selective ionophore. Valinomycin (NSC 122023) inhibits lymphocyte proliferation by its effects on the cell membrane, and induces apoptosis in CHO cells^[1]. Valinomycin induces activation of PINK1 leading to Parkin Ser65 phosphorylation^[2].

REFERENCES

- [1]. Daniele RP, et al. A potassium ionophore (valinomycin) inhibits lymphocyte proliferation by its effects on the cell membrane. Proc Natl Acad Sci U S A. 1976 Oct;73(10):3599-602.
- [2]. Tosteson DC, et al. The effect of valinomycin on potassium and sodium permeability of HK and LK sheep red cells. J Gen Physiol. 1967 Dec;50(11):2513-25.
- [3]. Abdalah R, et al. Valinomycin-induced apoptosis in Chinese hamster ovary cells. Neurosci Lett. 2006 Sep 11;405(1-2):68-73.
- [4]. Kondapalli C, et al. PINK1 is activated by mitochondrial membrane potential depolarization and stimulates Parkin E3 ligase activity by phosphorylating Serine 65. Open Biol. 2012 May;2(5):120080.
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Caution: Product has not been fully validated for medical applications. For research use only.

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