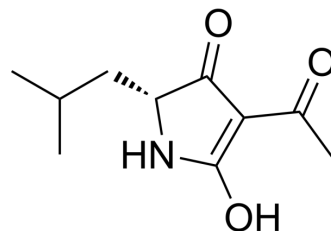


## Mutanocyclin

Cat. No.:	HY-N11772		
CAS No.:	875455-92-8		
Molecular Formula:	C <sub>10</sub> H <sub>15</sub> NO <sub>3</sub>		
Molecular Weight:	197.23		
Target:	Fungal		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 50 mg/mL (253.51 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		5.0702 mL	25.3511 mL	50.7022 mL
		5 mM		1.0140 mL	5.0702 mL	10.1404 mL
		10 mM		0.5070 mL	2.5351 mL	5.0702 mL
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2 mg/mL (10.14 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2 mg/mL (10.14 mM); Clear solution					

### BIOLOGICAL ACTIVITY

Description	Mutanocyclin is a potent antifungal agent. Mutanocyclin inhibits <i>Candida albicans</i> ( <i>C. albicans</i> ) filamentation. Mutanocyclin decreases the mRNA expression of HWP1, ECE1, FLO8, TEC1. Mutanocyclin inhibits yeast-form in ex vivo mouse <sup>[1]</sup> .
In Vitro	Mutanocyclin (8, 16, 32 µg/mL, 24, 36 h) inhibits <i>Candida albicans</i> ( <i>C. albicans</i> ) filamentation in a dose-dependent manner <sup>[1]</sup> . Mutanocyclin (32 µg/mL) decreases the mRNA expression of HWP1, ECE1, FLO8, TEC1 in <i>C. albicans</i> cells <sup>[1]</sup> . Mutanocyclin functions by regulating the PKA catabolic subunit Tpk2 and its preferential binding target Sfl1 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Mutanocyclin (32 µg/mL; 24 h infects tongues of mouse) inhibits yeast-form in ex vivo mouse tongue infection models of <i>C. albicans</i> <sup>[1]</sup> .

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Mutanocyclin (6.4, 12.8, 25.6 µg/mL; 48 h) attenuates the virulence of *C. albicans* in the *G. mellonella* infection model<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

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[1]. Tao L, et al. *Streptococcus mutans* suppresses filamentous growth of *Candida albicans* through secreting mutanocyclin, an unacylated tetramic acid. *Virulence*. 2022 Dec;13(1):542-557.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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