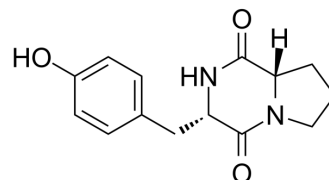


Maculosin

Cat. No.:	HY-P1940
CAS No.:	4549-02-4
Molecular Formula:	C ₁₄ H ₁₆ N ₂ O ₃
Molecular Weight:	260.29
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (384.19 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.8419 mL	19.2093 mL	38.4187 mL
		5 mM	0.7684 mL	3.8419 mL	7.6837 mL
		10 mM	0.3842 mL	1.9209 mL	3.8419 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.60 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Maculosin is a host-specific phytotoxin for spotted knapweed from <i>Alternaria alternata</i> . Maculosin is a quorum-sensing molecule involved in cell-cell communication by <i>Pseudomonas aeruginosa</i> . Maculosin also acts as a signaling molecule regulating virulence gene expression in <i>Lactobacillus reuteri</i> . Maculosin shows antioxidant, anti-cancer and non-toxicity properties. Maculosin shows cytotoxic activity against the human liver cancer cell lines, with an IC ₅₀ of 48.90 μg/mL ^{[1][2][3]} .
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REFERENCES

- [1]. Lee W, et al. *Vibrio vulnificus* quorum-sensing molecule cyclo(Phe-Pro) inhibits RIG-I-mediated antiviral innate immunity. *Nat Commun.* 2018 Apr 23;9(1):1606.
- [2]. Stierle AC, et al. Maculosin, a host-specific phytotoxin for spotted knapweed from *Alternaria alternata*. *Proc Natl Acad Sci U S A.* 1988 Nov;85(21):8008-11.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA