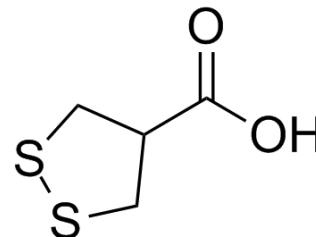


Asparagusic acid

Cat. No.:	HY-50730
CAS No.:	2224-02-4
Molecular Formula:	C ₄ H ₆ O ₂ S ₂
Molecular Weight:	150.22
Target:	Parasite
Pathway:	Anti-infection
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 46 mg/mL (306.22 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	6.6569 mL	33.2845 mL	66.5690 mL
	5 mM	1.3314 mL	6.6569 mL	13.3138 mL
	10 mM	0.6657 mL	3.3285 mL	6.6569 mL

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

In Vivo

- Add each solvent one by one: 1% DMSO >> 99% saline
Solubility: ≥ 0.5 mg/mL (3.33 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution
- Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
Solubility: 2.5 mg/mL (16.64 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (16.64 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Asparagusic acid is a sulfur-containing flavor component produced by asparagus plants, with anti-parasitic effect.

Asparagusic acid is a plant growth inhibitor^{[1][2][3]}.

In Vitro

Asparagusic acid is toxic to several plant parasitic nematodes and would be a major factor in resistance of asparagus^[2]. Asparagusic acid inhibits growth in lettuce and other seedlings at 6.67×10^{-7} M to 6.67×10^{-7} M^[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Nat Prod. 2015 May 22;78(5):1179-83.

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REFERENCES

- [1]. Mitchell SC et al. Asparagusic acid. Phytochemistry. 2014 Jan;97:5-10.
- [2]. Takasugi, Mitsuo, et al. Identification of asparagusic acid as a nematicide occurring naturally in the roots of asparagus. Chemistry Letters (1975), (1), 43-4.
- [3]. Yoshio Kitahara, et al. Asparagusic acid, a new plant growth inhibitor in etiolated young asparagus shoots. Plant and Cell Physiology (1972), 13(5), 923-25.
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Caution: Product has not been fully validated for medical applications. For research use only.

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