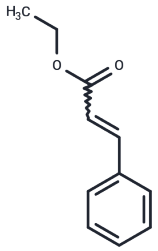
Data Sheet (Cat.No.TN1624)

TargetMol

Ethyl cinnamate

Chemical Properties



CAS No. : 103-36-6

Formula: C11H12O2

Molecular Weight: 176.21

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Ethyl cinnamate has antifungal, and vasorelaxant effects. Ethyl cinnamate can lead to the damage of cell membrane system and metabolic disorder through inducing lipid peroxidation via initiating ROS overproduction. Ethyl cinnamate can inhibit the tonic contractions induced by high K+ and phenylephrine (PE) in a concentration-dependent manner, with respective IC50 values of 0.30 mM and 0.38 mM.
Targets(IC50)	Apoptosis,Calcium Channel,NO Synthase,Parasite,ROS,VEGFR
In vitro	Parameters, including biomass, F(v)/F(m) (maximal photochemical efficiency of PSII), Φ (PSII) (actual photochemical efficiency of PSII in the light), FDA, and PI staining fluorescence, were measured. The results showed the following: (1) The inhibition on biomass increased as the exposure concentration increased. 1 mg/L Ethyl cinnamate was sufficient to reduce the total biomass of C. vulgaris. The 48-h and 72-h EC50 values were 2.07 mg/L (1.94-2.20) and 1.89 mg/L (1.82-1.97). (2) After 24 h of exposure to 2-4 mg/L Ethyl cinnamate, the photosynthesis of C. vulgaris almost ceased, manifesting in DΦ(PSII) being close to zero. After 72 h of exposure to 4 mg/L Ethyl cinnamate, the Fv /Fm of C. vulgaris dropped to zero. (3) Ethyl cinnamate also affected the cellular physiology of C. vulgaris, but these effects resulted in the inhibition of cell yield rather than cell death[1]

Solubility Information

Solubility	DMSO: 50 mg/mL (283.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (11.35 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.675 mL	28.3752 mL	56.7505 mL
5 mM	1.135 mL	5.675 mL	11.3501 mL
10 mM	0.5675 mL	2.8375 mL	5.675 mL
50 mM	0.1135 mL	0.5675 mL	1.135 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Jiao Y, et al. Toxic Effects of Ethyl Cinnamate on the Photosynthesis and Physiological Characteristics of Chlorella vulgaris Based on Chlorophyll Fluorescence and Flow Cytometry Analysis. ScientificWorldJournal. 2015;2015: 107823.
Anika Klingberg, et al. Fully Automated Evaluation of Total Glomerular Number and Capillary Tuft Size in Nephritic Kidneys Using Lightsheet Microscopy. J Am Soc Nephrol. 2017 Feb;28(2):452-459.
S P Bhatia, et al. Fragrance material review on ethyl cinnamate. Food Chem Toxicol. 2007;45 Suppl 1:S90-4.