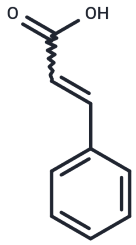
Data Sheet (Cat.No.T5646)

TargetMol

Cinnamic acid

Chemical Properties



CAS No. : 621-82-9

Formula: C9H8O2

Molecular Weight: 148.16

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

Biological Description

Description	Cinnamic acid (β-Phenylacrylic acid) has potential use in cancer intervention,The concentration causing a 50% reduction of cell proliferation (IC50) ranged from 1 to 4.5 mM in glioblastoma, melanoma, prostate and lung carcinoma cells.
Targets(IC50)	Endogenous Metabolite
In vivo	Oinnamic acid?exerts anti-diabetic activity by improving glucose tolerance in vivo and stimulating insulin secretion in vitro.
Animal Research	Non-obese type 2 diabetes was developed by injecting 90 mg/kg streptozotocin in 2-day-old Wistar pups. Cinnamic acid and cinnamaldehyde were administered orally to diabetic rats for assessing acute blood glucose lowering effect and improvement of glucose tolerance. Additionally, insulin secretory activity of cinnamic acid and cinnamaldehyde was evaluated in isolated mice islets. Cinnamic acid, but not cinnamaldehyde, decreased blood glucose levels in diabetic rats in a time- and dose-dependent manner. Oral administration of cinnamic acid with 5 and 10 mg/kg doses to diabetic rats improved glucose tolerance in a dose-dependent manner. The improvement by 10 mg/kg cinnamic acid was comparable to that of standard drug glibenclamide (5 mg/kg).

Solubility Information

Solubility	Ethanol: 50 mg/mL (337.47 mM),Sonication is recommended. DMSO: 250 mg/mL (1687.37 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.7495 mL	33.7473 mL	67.4946 mL
5 mM	1.3499 mL	6.7495 mL	13.4989 mL
10 mM	0.6749 mL	3.3747 mL	6.7495 mL
50 mM	0.135 mL	0.6749 mL	1.3499 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

Hafizur R M , Hameed A , Shukrana M , et al. Cinnamic acid exerts anti-diabetic activity by improving glucose tolerance in vivo and by stimulating insulin secretion in vitro[J]. Phytomedicine, 2015, 22(2):297-300.