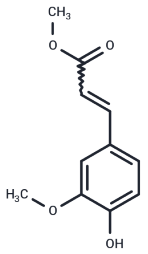
Data Sheet (Cat.No.T3S0006)

TargetMol

(E)-Ferulic acid methyl ester

Chemical Properties



CAS No. : 22329-76-6

Formula: C11H12O4

Molecular Weight: 208.21

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	(E)-Ferulic acid methyl ester (Methyl (E)-ferulate) is a potential inhibitor of the mitogen-activated phosphor kinase pathway and an anti-inflammatory agent first isolated from the medicinal plant S. tuberosa. Additionally, it shows promising anthelmintic activity against Haemonchus contortus.
Targets(IC50)	NO Synthase,Antifection,COX,IL Receptor,JNK,p38 MAPK,TNF
In vitro	The objective of this study is to evaluate the toxicity of Methyl ferulate (MF), methyl p-coumarate (MpC), and pulegone 1,2-epoxide (PE) with in vitro and in vivo assays. METHODS AND RESULTS:The in vitro toxicity of Methyl ferulate, MpC, and PE was assessed at a concentration of 10 mg/ml with the Ames assay using two strains of Salmonella typhimurium TA98 and TA100. Human red blood cells (RBC) were used to determine the hemolytic activity of these compounds. PE produced 6-8% hemolysis of RBCs at all the tested concentrations while Methyl ferulate and MpC produced 10-5% hemolysis up to 20 mg/ml, and 50-85% hemolysis at concentrations of 40 and 80 mg/ml, respectively. The Ames assay indicated that Methyl ferulate, MpC, and PE were non-mutagenic as the test values were not significantly higher as compared with background values of the assay. BSLB suggested the lethal concentration (LC50) values of Methyl ferulate, MpC, and PE as 4.38, 6.74, and 25.91 mg/ml, respectively. In vivo ocular and dermal irritation scores of Methyl ferulate, MpC, and PE were comparable with ethanol (control) in rabbits indicating the non-irritant nature of these natural compounds. CONCLUSIONS:The present studies suggest that these compounds are non-toxic/non-irritant and might be used for medicinal purposes.

Solubility Information

Solubility	DMSO: 50 mg/mL (240.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8028 mL	24.0142 mL	48.0284 mL
5 mM	0.9606 mL	4.8028 mL	9.6057 mL
10 mM	0.4803 mL	2.4014 mL	4.8028 mL
50 mM	0.0961 mL	0.4803 mL	0.9606 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

In vitro and in vivo toxicological evaluations of methyl ferulate, methyl p-coumarate, and pulegone 1,2-epoxide. Pharm Biol. 2015 Jun 11:1-7.
Caffeoyl and coumaroyl derivatives from Acacia cochliacantha exhibit ovicidal activity against Haemonchus contortus. J Ethnopharmacol. 2017 May 23;204:125-131.

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