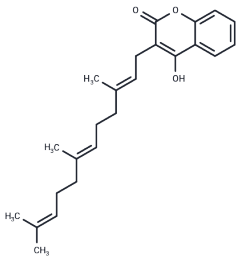
Data Sheet (Cat.No.T11274)

TargetMol

Ferulenol

Chemical Properties



CAS No. : 6805-34-1

Formula: C24H30O3

Molecular Weight: 366.49

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	Ferulenol, a sesquiterpene prenylated coumarin derivative, demonstrates potent antimycobacterial activity and [haemorrhagic] action by selectively targeting succinate ubiquinone reductase within the ubiquinone cycle.
Targets(IC50)	Others,OXPHOS,Mitochondrial Metabolism
In vitro	At low concentrations, ferulenol suppresses ATP synthesis by targeting adenine nucleotide translocase (ANT), affecting its function without restricting mitochondrial respiration. As concentrations increase, it also reduces oxygen consumption. Specifically, ferulenol targets succinate ubiquinone reductase (SQR) within complex II, inhibiting its function without impacting the succinate dehydrogenase activity. This inhibition occurs in a concentration-dependent manner, with ferulenol's efficacy comparable to that of thenoyltrifluoroacetone (TTFA). Furthermore, ferulenol disrupts the oxidative phosphorylation process through its interactions with ANT and complex II of the respiratory chain, showcasing its multifaceted inhibitory effects on cellular energy processes.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7286 mL	13.6429 mL	27.2859 mL
5 mM	0.5457 mL	2.7286 mL	5.4572 mL
10 mM	0.2729 mL	1.3643 mL	2.7286 mL
50 mM	0.0546 mL	0.2729 mL	0.5457 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

Lahouel M, et al. Ferulenol specifically inhibits succinate ubiquinone reductase at the level of the ubiquinonecycle. Biochem Biophys Res Commun. 2007 Mar 30;355(1):252-7.

Mamoci E, et al. Chemical composition and in vitro activity of plant extracts from Ferula communis and Dittrichia viscosa against postharvest fungi. Molecules. 2011 Mar 22;16(3):2609-25.

DrissLamnaouer, et al. Ferulenol and ω-hydroxyferulenol, toxic coumarins from Ferula communis var. genuine. Volume 26, Issue 6, 1987, Pages 1613-1615.

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