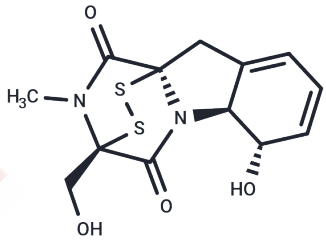
Data Sheet (Cat.No.TN1694)

TargetMol

Gliotoxin

Chemical Properties



CAS No. : 67-99-2

Formula: C13H14N2O4S2

Molecular Weight: 326.39

Storage: Store at low temperature
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	Gliotoxin, a Wnt signaling pathway inhibitor, induces growth inhibition and apoptosis in multiple colorectal cancer cell lines with mutations of the Wnt signaling pathway. Gliotoxin is a mycotoxin produced by several moulds such as Aspergillus fumigatus. Gliotoxin activates PKA and increases intracellular cAMP concentration and inhibits inducible NF-κB activity by preventing IκB degradation, which consequently induces host-cell apoptosis.
Targets(IC50)	Apoptosis,NF-κB,Antibacterial,Antibiotic,Antifection,Antifungal,COX,PKA,Wnt/beta-catenin
In vitro	The structures of these compounds (1-12) were determined mainly by the extensive NMR, ESIMS spectra data and by comparison with previously described compounds. Besides, anti-tuberculosis, cytotoxic, antibacterial, COX-2 inhibitory and antiviral activities of these compounds were evaluated[1]

Solubility Information

Solubility	Chloroform: 10 mg/mL (30.64 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0638 mL	15.3191 mL	30.6382 mL
5 mM	0.6128 mL	3.0638 mL	6.1276 mL
10 mM	0.3064 mL	1.5319 mL	3.0638 mL
50 mM	0.0613 mL	0.3064 mL	0.6128 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

Zhang C, et al. Gliotoxin Induces Cofilin Phosphorylation to Promote Actin Cytoskeleton Dynamics and Internalization of Aspergillus fumigatus Into Type II Human Pneumocyte Cells. Front Microbiol. 2019 Jun 18;10:1345.

Schlam D, et al. Gliotoxin Suppresses Macrophage Immune Function by Subverting Phosphatidylinositol 3,4,5-Trisphosphate Homeostasis. MBio. 2016 Apr 5;7(2):e02242.

Coméra C, et al. Gliotoxin from Aspergillus fumigatus affects phagocytosis and the organization of the actin cytoskeleton by distinct signalling pathways in human neutrophils. Microbes Infect. 2007 Jan;9(1):47-54. Epub 2006 Dec 12.

Luo X, et al. Antituberculosis compounds from a deep-sea-derived fungus Aspergillus sp. SCSIO Ind09F01. Nat Prod Res. 2017 Aug;31(16):1958-1962.