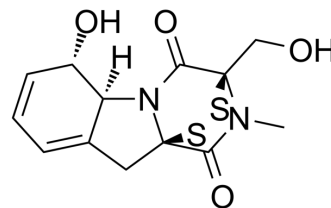


Gliotoxin

Cat. No.:	HY-N6727		
CAS No.:	67-99-2		
Molecular Formula:	C ₁₃ H ₁₄ N ₂ O ₄ S ₂		
Molecular Weight:	326.39		
Target:	Apoptosis; PKA; NF-κB; Bacterial; Fungal; Antibiotic		
Pathway:	Apoptosis; Protein Tyrosine Kinase/RTK; Stem Cell/Wnt; NF-κB; Anti-infection		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (15.32 mM; Need ultrasonic and warming)
 DMF : 5 mg/mL (15.32 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	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

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Gliotoxin is a secondary metabolite, the most abundant mycotoxin secreted by *A. fumigatus*, inhibits the phagocytosis of macrophages and the immune functions of other immune cells^[1]. Gliotoxin inhibits inducible NF-κB activity by preventing I κB degradation, which consequently induces host-cell apoptosis^[2]. Gliotoxin activates PKA and increases intracellular cAMP concentration; modulates actin cytoskeleton rearrangement to facilitate *A. fumigatus* internalization into lung epithelial cells^[3].

REFERENCES

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

[2]. 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.

[3]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA