

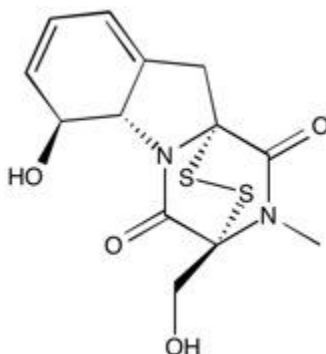
Catalog # 10-2076

Gliotoxin

CAS# 67-99-2

(3R,5aS,6S,10aR)-2,3,5a,6-Tetrahydro-6-hydroxy-3-(hydroxymethyl)-2-methyl-10H-3,10a-epidithiopyrazino
[1,2-a]indole-1,4-dione; Aspergillin

Lot # X101903



A fungal metabolite with immunosuppressive properties; blocks phagocytosis, cytokine production and proliferation of T and B cells.¹ Inhibits chymotrypsin-like activity of 20S proteasome preventing I κ B α degradation and preventing NF- κ B degradation². Displays antiinflammatory activity³ and blocks leukotriene B₄ production via inhibition of LTA₄ hydrolase⁴. It inhibits nuclear NOTCH2 and recovers a tumor-suppressor NOTCH3 activity in chronic lymphocytic leukemia cells.⁵

- 1) Waring & Beaver (1996), *Gliotoxin and related epipolythiodioxopiperazines*; Gen. Pharmacol., **27** 1311
- 2) Kroll et al. (1999), *The secondary fungal metabolite gliotoxin targets proteolytic activities of the proteasome*; Chem. Biol., **6** 689
- 3) Fitzpatrick et al. (2000), *In vitro and in vivo effects of gliotoxin, a fungal metabolite: efficacy against dextran sodium sulfate-induced colitis in rats*; Dig. Dis. Sci., **45** 2327
- 4) Konig et al. (2019), *Gliotoxin from Aspergillus fumigatus Abrogates Leukotriene B4 Formation through Inhibition of Leukotriene As4 Hydrolase*; Cell Chem. Biol., **26** 524
- 5) Hubmann et al. (2020), *Targeting Nuclear NOTCH2 by Gliotoxin Recovers a Tumor-Suppressor NOTCH3 Activity in CLL*; Cells, **9** 1484

PHYSICAL DATA

Molecular Weight:	326.39
Molecular Formula:	C ₁₃ H ₁₄ N ₂ O ₄ S ₂
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 15 mg/ml)
Physical Description:	White lyophilized solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month.

