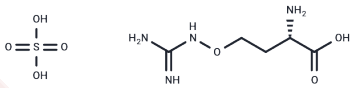
Data Sheet (Cat.No.T5838)

TargetMol

L-Canavanine sulfate

Chemical Properties



CAS No. : 2219-31-0

Formula: C5H14N4O7S

Molecular Weight: 274.25

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	L-Canavanine sulfate is a selective inducible NO synthase inhibitor.
Targets(IC50)	NO Synthase,NOD
In vitro	L-Canavanine sulfate,which is hardly toxic alone, potentiated the cytotoxicity of VIN and PTX in HeLa and hepatocellular carcinoma cells[1].
In vivo	Intravenous infusion of L-canavanine (100 mg/kg), a selective inhibitor of inducible NO synthase in vitro, 60 min and 180 min after lipopolysaccharide challenge, produced an increase in mean arterial pressure and reversed the lipopolysaccharide induced hypotension. However, in lipopolysaccharide challenged animals protected from hypotension by administration of L-canavanine (60 min post challenge), intravenous infusion of NG-nitro-L-arginine methyl ester at 180 min post challenge caused an immediate rise in mean arterial pressure, followed by a rapid fall in blood pressure and heart rate, and sudden death. In contrast, a second dose of L-canavanine at 180 min post challenge maintained blood pressure for the duration of the experiment. Inhibition of both constitutive and inducible NO synthase during endotoxaemia is lethal[2].
Cell Research	The following cancer cells grown in arginine-rich and arginine-free media were employed: HeLa, Hep G2 and SK-HEP-1. Drug combination experiment used a method based on the median-effect principle and mass-action law[1].

Solubility Information

Solubility	H2O: 125 mg/mL (455.79 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6463 mL	18.2315 mL	36.4631 mL
5 mM	0.7293 mL	3.6463 mL	7.2926 mL
10 mM	0.3646 mL	1.8232 mL	3.6463 mL
50 mM	0.0729 mL	0.3646 mL	0.7293 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

Nurcahyanti A D R , Wink M . Cytotoxic potentiation of vinblastine and paclitaxel by L-canavanine in human cervical cancer and hepatocellular carcinoma cells[J]. Phytomedicine, 2015, 22(14):S0944711315003190.
Teale D M , Atkinson A M . L-Canavanine restores blood pressure in a rat model of endotoxic shock[J]. European Journal of Pharmacology, 1994, 271(1):0-92.