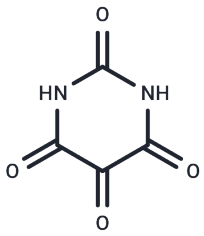
Data Sheet (Cat.No.T7814)

TargetMol

Alloxan monohydrate

Chemical Properties



CAS No. : 2244-11-3

Formula: C4H4N2O5

Molecular Weight: 160.09

Storage: Keep away from moisture,Keep away from direct sunlight
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	Alloxan Monohydrate is a diabetogenic agent that acts as a proteasome inhibitor and induces diabetes in experimental animals by damaging the insulin-secreting β-cells in the pancreas. It is commonly used to establish diabetes models.
Targets(IC50)	Proteasome
In vitro	Alloxan caused the accumulation of ubiquitinated proteins in NRK cells through the inhibition of the proteolytic activities of the proteasome.?Alloxan directly acts on the chymotrypsin- and trypsin-like peptidase activities[1]

Solubility Information

Solubility	DMSO: 60 mg/mL (374.79 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (12.49 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.2465 mL	31.2324 mL	62.4649 mL
5 mM	1.2493 mL	6.2465 mL	12.493 mL
10 mM	0.6246 mL	3.1232 mL	6.2465 mL
50 mM	0.1249 mL	0.6246 mL	1.2493 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

Major species differences between humans and rodents in the susceptibility to pancreatic β-cell injury.
Zhou W , Wei L , Xiao T , et al. Diabetogenic agent alloxan is a proteasome inhibitor.[J]. Biochemical & Biophysical Research Communications, 2017, 488(2).
Szkuldeshi T . The mechanism of alloxan and streptozotocin action in beta cells of the rat pancreas[J]. Physiol Rev. 2001, 50.