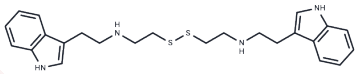
Data Sheet (Cat.No.T11347)

TargetMol

G6PD activator AG1

Chemical Properties



CAS No. : 421581-52-4

Formula: C24H30N4S2

Molecular Weight: 438.65

Storage: Keep away from direct sunlight,Store at low temperature,The compound is unstable in solution. Please use soon
Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	G6PD activator AG1 is a glucose-6-phosphate dehydrogenase (G6PD) agonist that promotes glucose-6-phosphate dehydrogenase (G6PD) oligomerization to a catalytically competent form. G6PD activator AG1 reduces oxidative stress in cells and zebrafish, reduces chloroquine or diamide-induced oxidative stress in human erythrocytes, and can be used to study glucose-6-phosphate dehydrogenase deficiency.
Targets(IC50)	Others,Dehydrogenase,NADPH
In vitro	G6PD activator AG1 (1-5 μM; pre-incubated overnight) reduces the extent of hemolysis with 5 μM in human erythrocytes suspension (5%) exposed to either 1 mM chloroquine (CQ; 4 hours) or diamide (a GSH oxidant; 4 hours). G6PD activator AG1 increases GSH levels and reduced ROS levels together with increased G6PD activity under these drug-induced oxidative stress. [1] G6PD activator AG1 (50, 100, 250, 500, 750, 1000 nM) increases the viability by 20% and the proteolytic stability of Canton G6PD in SH-SY5Y cells. G6PD activator AG1 has no effect when G6PD was knocked down by siRNA, supporting the specificity of G6PD activator AG1 toward G6PD. [1]

Solubility Information

Solubility	DMSO: 150 mg/mL (341.96 mM),Sonication is recommended. (The compound is unstable in solution, please use soon.) (< 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 (4.56 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	2.2797 mL	11.3986 mL	22.7972 mL
5 mM	0.4559 mL	2.2797 mL	4.5594 mL
10 mM	0.228 mL	1.1399 mL	2.2797 mL
50 mM	0.0456 mL	0.228 mL	0.4559 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

Ryan K, et al. Current investigations on clinical pharmacology and therapeutics of Glucose-6-phosphate dehydrogenase deficiency. Pharmacol Ther. 2021 Jun;222:107788.