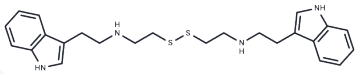
Data Sheet (Cat.No.T11347)

TargetMol

G6PD activator AG1

Chemical Properties



CAS No. : 421581-52-4

Formula: C24H30N4S2

Molecular Weight: 438.65

Appearance: no data available

Storage: keep away from direct sunlight,store at low temperature
Pure form: -20°C for 3 years

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)	Dehydrogenase
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: 15 mg/mL (34.2 mM),Sonication is recommended. (The compound is unstable in solution, please use soon.) (< 1 mg/ml refers to the product slightly soluble or insoluble)

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.

Reference

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