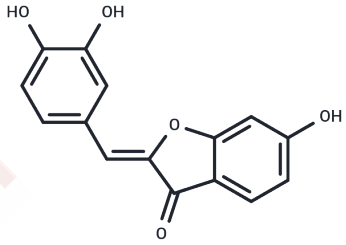
Data Sheet (Cat.No.TN2244)

TargetMol

Sulfuretin

Chemical Properties



CAS No. : 120-05-8

Formula: C15H10O5

Molecular Weight: 270.24

Storage: Store at low temperature
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	Sulfuretin is a potent anti-oxidant, has protective effect against t-BHP-induced oxidative damage in human liver-derived HepG2 cells is attributable to its ability to scavenge ROS and up-regulate the activity of HO-1 through the Nrf2/ARE and JNK/ERK signaling pathways.
Targets(IC50)	NF-κB,Autophagy
In vitro	In this study, we investigated the protective effects of Sulfuretin against tert-butyl hydroperoxide (t-BHP)-induced oxidative injury. The results indicated that the addition of Sulfuretin before t-BHP treatment significantly inhibited cytotoxicity and reactive oxygen species (ROS) production in human liver-derived HepG2 cells. Sulfuretin up-regulated the activity of the antioxidant enzyme heme oxygenase (HO)-1 via nuclear factor E2-related factor 2 (Nrf2) translocation into the nucleus and increased the promoter activity of the antioxidant response element (ARE). Moreover, Sulfuretin exposure enhanced the phosphorylation of c-Jun N-terminal kinase (JNK) and extracellular signal-regulated kinase 1/2 (ERK1/2), which are members of the mitogen-activated protein kinase (MAPK) family. Furthermore, cell treatment with a JNK inhibitor (SP600125) and ERK inhibitor (PD98059) reduced Sulfuretin-induced HO-1 expression and decreased its protective effects[1]

Solubility Information

Solubility	Methanol: 1 mg/mL (3.7 mM),Sonication is recommeded. H2O: < 1 mg/mL (insoluble or slightly soluble) DMSO: 10 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 (7.4 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	3.7004 mL	18.5021 mL	37.0041 mL
5 mM	0.7401 mL	3.7004 mL	7.4008 mL
10 mM	0.370 mL	1.8502 mL	3.7004 mL
50 mM	0.074 mL	0.370 mL	0.7401 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

The cytoprotective effect of sulfuretin against tert-butyl hydroperoxide-induced hepatotoxicity through Nrf2/ARE and JNK/ERK MAPK-mediated heme oxygenase-1 expression.Int J Mol Sci. 2014 May 19;15(5):8863-77.