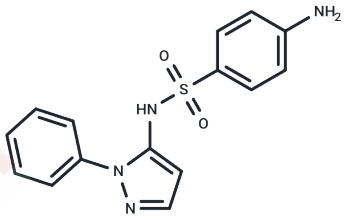
Data Sheet (Cat.No.T4567)

TargetMol

Sulfaphenazole

Chemical Properties



CAS No. :	526-08-9
Formula:	C15H14N4O2S
Molecular Weight:	314.36
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	Sulfaphenazole (Plisulfan) is an inhibitor of CYP2C9 (Ki: 0.3 μM) that demonstrates at least 100-fold selectivity over other CYP450 isoforms (Ki: 63/29 μM for CYP2C8/CYP2C18, respectively, and no activity at CYP1A1, CYP1A2, CYP3A4, CYP2C19). At 10 μM, sulfaphenazole has been shown to inhibit endothelium-derived hyperpolarizing factor synthase, a CYP450 isozyme in the porcine coronary artery homologous to CYP2C8/9 that generates reactive oxygen species in coronary endothelial cells and modulates vascular tone and homeostasis.
Targets(IC50)	Apoptosis,Antibacterial,Antibiotic,Cytochromes P450,Necroptosis

Solubility Information

Solubility	Ethanol: 0.5 mg/mL (1.59 mM),Sonication is recommended. DMSO: 250 mg/mL (795.27 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: 10 mg/mL (31.81 mM),Solution. 10% DMSO+90% Saline: < 10 mg/mL (31.81 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *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	3.1811 mL	15.9053 mL	31.8107 mL
5 mM	0.6362 mL	3.1811 mL	6.3621 mL
10 mM	0.3181 mL	1.5905 mL	3.1811 mL
50 mM	0.0636 mL	0.3181 mL	0.6362 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

Annah Mancy, et al. Interaction of Sulfaphenazole Derivatives with Human Liver Cytochromes P450 2C: Molecular Origin of the Specific Inhibitory Effects of Sulfaphenazole on CYP 2C9 and Consequences for the Substrate Binding Site Topology of CYP 2C9[J]. Biochemistry, 1996, 35(50):16205.
Sai Y, et al. Assessment of specificity of eight chemical inhibitors using cDNA-expressed cytochromes P450[J]. Xenobiotica, 2000, 30(4):327-343.
Fleming I, et al. Endothelium-Derived Hyperpolarizing Factor Synthase (Cytochrome P450 2C9) Is a Functionally Significant Source of Reactive Oxygen Species in Coronary Arteries[J]. Circulation Research, 2001, 88(1):44.