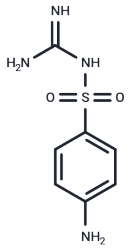
Data Sheet (Cat.No.T0510)

TargetMol

Sulfaguanidine

Chemical Properties



CAS No. : 57-67-0

Formula: C7H10N4O2S

Molecular Weight: 214.24

Storage: 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	Sulfaguanidine (Guanicil), a sulfonamide, is served as an anti-infective agent.
Targets(IC50)	Antibacterial,Antibiotic,Autophagy
In vitro	Adult rats exhibit a more robust elimination capability for Sulfaguanidine when compared to neonatal rats. Pharmacokinetic studies of gastrointestinal absorption reveal that, following oral administration, the peak plasma concentration in adult rats is significantly lower than that in neonatal rats, although there is no marked difference in the time taken to reach peak blood levels. The absolute bioavailability in adult rats (12.76%) is approximately one-fifth that of neonatal rats (57.86%). In adults, the plasma elimination of Sulfaguanidine, administered intravenously at doses of 2.5 or 25 mg/kg, can be described by a two-compartment open model. Conversely, the plasma concentration profile of Sulfaguanidine, post oral administration of 25 mg/kg, is consistent with a one- or two-compartment open model. Consequently, Sulfaguanidine is less readily absorbed in adult rats, while neonatal rats demonstrate effective absorption.
In vivo	Sulfaguanidine, one of the earliest sulfa drugs employed in the treatment of intestinal infections, effectively inhibits the synthesis of nutritional factors in intestinal bacteria. It also efficiently impedes the growth of Gram-negative enterobacteria.

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 55 mg/mL (256.72 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 (9.34 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	4.6677 mL	23.3383 mL	46.6766 mL
5 mM	0.9335 mL	4.6677 mL	9.3353 mL
10 mM	0.4668 mL	2.3338 mL	4.6677 mL
50 mM	0.0934 mL	0.4668 mL	0.9335 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

Mizuno N, et al. J Pharmacobiodyn. 1986, 9(10), 787-792.