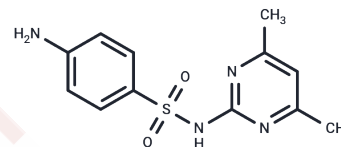


Sulfamethazine

Chemical Properties

CAS No. :	57-68-1
Formula:	C ₁₂ H ₁₄ N ₄ O ₂ S
Molecular Weight:	278.33
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	Sulfamethazine (Sulfadimidine) is a sulfanilamide anti-infective agent. It has a spectrum of antimicrobial action similar to other sulfonamides.
Targets(IC50)	Antibacterial, Antibiotic
In vivo	Sulfamethazine acts as a structural analog and competitive antagonist of para-aminobenzoic acid (PABA), inhibiting bacterial utilization of PABA for the biosynthesis of folate, a crucial metabolite for DNA synthesis. Additionally, sulfamethazine impedes dihydrofolate formation by inhibiting dihydropteroate synthase activity.

Solubility Information

Solubility	DMSO: 50 mg/mL (179.64 mM), Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 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 (7.19 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5929 mL	17.9643 mL	35.9286 mL
5 mM	0.7186 mL	3.5929 mL	7.1857 mL
10 mM	0.3593 mL	1.7964 mL	3.5929 mL
50 mM	0.0719 mL	0.3593 mL	0.7186 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

Perez S, et al. Environ Toxicol Chem, 2005, 24(6), 1361-1367.

Kaniou S, et al. Chemosphere, 2005, 60(3), 372-380.

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