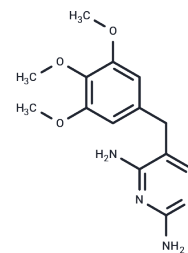


Trimethoprim

Chemical Properties

CAS No. :	738-70-5
Formula:	C ₁₄ H ₁₈ N ₄ O ₃
Molecular Weight:	290.32
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	Trimethoprim (NSC-106568) is a Dihydrofolate Reductase Inhibitor Antibacterial. The mechanism of action of trimethoprim is as a Dihydrofolate Reductase Inhibitor, and Cytochrome P450 2C8 Inhibitor, and Organic Cation Transporter 2 Inhibitor.
Targets(IC50)	Antifolate, Antibacterial, Antibiotic, DHFR, DNA/RNA Synthesis
In vivo	Trimethoprim acts by interfering with the bacterial dihydrofolate reductase, inhibiting the synthesis of tetrahydrofolic acid. This inhibition causes a deficiency in nucleotides essential for bacterial DNA replication, which in some instances leads to cell death due to thymineless death.

Solubility Information

Solubility	DMSO: 122 mg/mL (420.23 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: 4 mg/mL (13.78 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	3.4445 mL	17.2224 mL	34.4448 mL
5 mM	0.6889 mL	3.4445 mL	6.889 mL
10 mM	0.3444 mL	1.7222 mL	3.4445 mL
50 mM	0.0689 mL	0.3444 mL	0.6889 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

Vouloumanou EK, et al. *Int J Antimicrob Agents*, 2011, 38(3), 197-216.

Cribb AE, et al. *Adverse Drug React Toxicol Rev*, 1996, 15(1), 9-50.

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