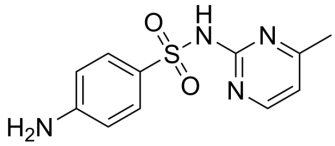
Sulfamerazine

Cat. No.:	HY-B0512
CAS No.:	127-79-7
Molecular Formula:	$C_{11}H_{12}N_4O_2S$
Molecular Weight:	264.3
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (378.36 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7836 mL	18.9179 mL	37.8358 mL
	5 mM	0.7567 mL	3.7836 mL	7.5672 mL
	10 mM	0.3784 mL	1.8918 mL	3.7836 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (9.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sulfamerazine (RP-2632) is a sulfonamide antibacterial. Sulfamerazine, the monomethyl derivative of sulfadiazine, is 2-sulfanilamido-4-methylpyrimidine. Sulfamerazine is a sulfonamide drug that inhibits bacterial synthesis of dihydrofolic acid by competing with para-aminobenzoic acid (PABA) for binding to dihydropteroate synthesizes[1].

IC_{50} & Target

Antibacterial

In Vitro

Sulfamerazine is bacteriostatic in nature. Inhibition of dihydrofolic acid synthesis decreases the synthesis of bacterial nucleotides and DNA[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Patent. US20230147129A1.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Aday B, et al. Synthesis of novel sulfonamide analogs containing sulfamerazine/sulfaguanidine and their biological activities. J Enzyme Inhib Med Chem. 2016 Dec;31(6):1005-10.

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