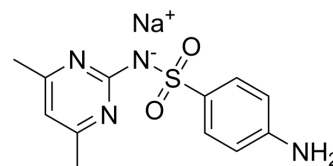


Sulfamethazine sodium

Cat. No.:	HY-B0035A
CAS No.:	1981-58-4
Molecular Formula:	C ₁₂ H ₁₃ N ₄ NaO ₂ S
Molecular Weight:	300.31
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (832.47 mM; Need ultrasonic)					
	H ₂ O : 100 mg/mL (332.99 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		3.3299 mL	16.6495 mL	33.2989 mL
5 mM			0.6660 mL	3.3299 mL	6.6598 mL	
	10 mM		0.3330 mL	1.6649 mL	3.3299 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (6.93 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Sulfamethazine sodium (Sulfadimidine sodium) is an antimicrobial that is widely used to treat and prevent various animal diseases (such as gastrointestinal and respiratory tract infections). In China and the European Commission, the maximum residue level for Sulfamethazine sodium in animal product is set at 100 µg/kg ^{[1][2]} .
IC₅₀ & Target	Bacterial ^[1]
In Vivo	Sulfamethazine (80 mg/kg; intravenous injection; healthy female pigs) treatment significantly reduces α, β and AUC _{0-∞} , significantly increases t _{1/2α} , Vd and CIB, and upon a single intramuscular administration of 80 mg/kg of Sulfamethazine the absolute bioavailability in pigs is 1.01 ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	19 healthy female pigs (6-week-old, 4.5-6.2 kg) ^[1]
Dosage:	80 mg/kg
Administration:	Intravenous injection (Pharmacokinetic study)
Result:	The half-life in distribution phase is 0.23 h and half-lives in eliminations phase is 9.8 h. α , β and the $AUC_{0-\infty}$ were significantly decreased and $t_{1/2\alpha}$, Vd and CIB were significantly increased, and the absolute bioavailability in pigs is 1.01.

CUSTOMER VALIDATION

- Chemosphere. 2019 Jun;225:378-387.

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REFERENCES

- [1]. VAN Poucke LSG, et al. Pharmacokinetics and Tissue Residues of Sulfathiazole and Sulfamethazine in Pigs. J Food Prot. 1994 Sep;57(9):796-801.
- [2]. Sheng Y J, et al. Production of chicken yolk IgY to sulfamethazine: comparison with rabbit antiserum IgG. Food and Agricultural Immunology. 2015, 26(3):305-316.

Caution: Product has not been fully validated for medical applications. For research use only.

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