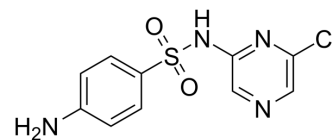


Sulfaclozine

Cat. No.:	HY-19285		
CAS No.:	102-65-8		
Molecular Formula:	C ₁₀ H ₉ ClN ₄ O ₂ S		
Molecular Weight:	284.72		
Target:	Bacterial; Parasite; Antibiotic		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 29 mg/mL (101.85 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.5122 mL	17.5611 mL	35.1222 mL
	5 mM	0.7024 mL	3.5122 mL	7.0244 mL
	10 mM	0.3512 mL	1.7561 mL	3.5122 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (8.78 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (8.78 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (8.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sulfaclozine (Sulfachloropyrazine) is an efficacious sulphonamide derivative with antibacterial and anticoccidial effects. Sulfaclozine is commonly used for the treatment of various poultry diseases (particularly, colibacteriosis, fowl cholera and coccidiosis)^[1].

IC₅₀ & Target

Coccidia

<p>In Vitro</p>	<p>The elimination of Sulfaclozine in the three systems: UV/TiO₂, UV/K₂S₂O₈, and UV/TiO₂/K₂S₂O₈. Sulfaclozine is weakly adsorbed on the surface of TiO₂ at pH 7 (< 5%) but efficiently eliminated with the following three systems: UV/TiO₂, UV/K₂S₂O₈, and UV/TiO₂/K₂S₂O₈ in ultra pure water. Moreover, 12 of Sulfaclozine by-products are identified and reaction pathways show that, in addition of *OH and SO₄*⁻ radicals, the conduction-band electrons are responsible for the formation of some main by-products either directly or by the formation of superoxide radicals^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
<p>In Vivo</p>	<p>Sulfaclozine (60 mg/kg; intravenous injection or oral administration; male broiler chickens) can be used primarily for the treatment of parasitic and microbial infections of the digestive tract rather than for the treatment of systemic infections^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" data-bbox="345 485 1515 825"> <tr> <td data-bbox="345 485 615 548">Animal Model:</td> <td data-bbox="615 485 1515 548">14 male broiler chickens (30-day-old)^[1]</td> </tr> <tr> <td data-bbox="345 548 615 611">Dosage:</td> <td data-bbox="615 548 1515 611">60 mg/kg</td> </tr> <tr> <td data-bbox="345 611 615 674">Administration:</td> <td data-bbox="615 611 1515 674">Intravenous injection or oral administration (Pharmacokinetic Analysis)</td> </tr> <tr> <td data-bbox="345 674 615 825">Result:</td> <td data-bbox="615 674 1515 825">Serum drug concentrations at 0.083, 0.50, 2, 6, 24 and 72h were determined to be 99.62, 83.50, 72.68, 58.43, 38.66 and 13.14 µg/mL, respectively, by intravenous injection. By oral administration were determined as 4.33, 7.95, 16.46, 22.88, 16.03 and 5.74 µg/mL, respectively.</td> </tr> </table>	Animal Model:	14 male broiler chickens (30-day-old) ^[1]	Dosage:	60 mg/kg	Administration:	Intravenous injection or oral administration (Pharmacokinetic Analysis)	Result:	Serum drug concentrations at 0.083, 0.50, 2, 6, 24 and 72h were determined to be 99.62, 83.50, 72.68, 58.43, 38.66 and 13.14 µg/mL, respectively, by intravenous injection. By oral administration were determined as 4.33, 7.95, 16.46, 22.88, 16.03 and 5.74 µg/mL, respectively.
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REFERENCES

[1]. Sentepe I, et al. Pharmacokinetic of sulfaclozine in broiler chickens. Food Chem Toxicol. 2010 Jan;48(1):448-451.

[2]. Ismail L, et al. Effect of water constituents on the degradation of sulfaclozine in the three systems: UV/TiO₂, UV/K₂S₂O₈, and UV/TiO₂/K₂S₂O₈. Environ Sci Pollut Res Int. 2018 Jan;25(3):2651-2663.

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

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