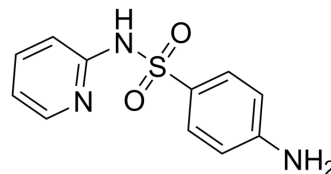


Sulfapyridine

Cat. No.:	HY-B0212		
CAS No.:	144-83-2		
Molecular Formula:	C ₁₁ H ₁₁ N ₃ O ₂ S		
Molecular Weight:	249.29		
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 : 60 mg/mL (240.68 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	4.0114 mL	20.0570 mL	40.1139 mL
	5 mM	0.8023 mL	4.0114 mL	8.0228 mL
	10 mM	0.4011 mL	2.0057 mL	4.0114 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: ≥ 3 mg/mL (12.03 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 3 mg/mL (12.03 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 3 mg/mL (12.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sulfapyridine, a major metabolite of Sulfasalazine, is a sulfonamide antibiotic agent. Sulfapyridine inhibits recombinant *P. carinii* dihydropteroate synthetase (DHPS) with an IC₅₀ of 0.18 μM. Sulfapyridine has antibacterial, anti-inflammatory and anti-rheumatic activities^{[1][2][3]}.

In Vitro

Sulfapyridine inhibits production of IL-8, chemokine (C-X-C motif) ligand 1 (CXCL1), and monocyte chemoattractant protein-1 (MCP-1) in synovial cells of rheumatoid arthritis (RA)^[1].

	MIC range of Sulfapyridine for <i>Y. enterocolitica</i> is 3.1-25 µg/mL and for <i>Salmonella</i> 25-100 µg/mL. <i>Campylobacter jejuni/coli</i> are less susceptible to Sulfapyridine with MIC values ranging from 200 to 800 µg/mL. <i>Shigella</i> and three of five <i>E. coli</i> strains are resistant to 1600 µg/mL of sulfapyridine. Two strains of <i>E. coli</i> are inhibited by 25 µg/mL ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Sulfapyridine (1 and 10 µg/kg; i.p.) significantly inhibits systemic allergic reaction induced by compound 48/80 in rats ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Kazuki Omoteyama, et al. Effects of salazosulfapyridine on the profile of cell surface proteins, revealed by biotinylation of cell surface proteins and 2-dimensional electrophoresis. *Biochim Biophys Acta Proteins Proteom.* 2019 Jan;1867(1):47-56.
- [2]. J J Andreasen, et al. In vitro susceptibility of diarrhoea producing gram negative enteric bacteria to sulfasalazine, 5-aminosalicylic acid, sulfapyridine and four quinolones. *Brief report. APMIS.* 1988 Jun;96(6):568-70.
- [3]. Y L Hong, et al. Inhibition of recombinant *Pneumocystis carinii* dihydropteroate synthetase by sulfa drugs. *Antimicrob Agents Chemother.* 1995 Aug;39(8):1756-63.
- [4]. H M Kim, et al. Inhibitory effect of mast cell-mediated immediate-type allergic reactions by sulfapyridine. *Immunopharmacol Immunotoxicol.* 2000 May;22(2):253-66.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA