Trimetrexate

Cat. No.: HY-10373

CAS No.: 52128-35-5

Molecular Formula: $C_{19}H_{23}N_5O_3$

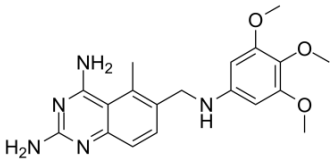
Molecular Weight: 369.42

Target: Bacterial; 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 : ≥ 61.5 mg/mL (166.48 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7069 mL	13.5347 mL	27.0695 mL
	5 mM	0.5414 mL	2.7069 mL	5.4139 mL
	10 mM	0.2707 mL	1.3535 mL	2.7069 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 (6.77 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Trimetrexate(CI-898) is a potent competitive inhibitor of bacterial, protozoan, and mammalian dihydrofolate reductase.IC50 value:Target: Antibiotic Trimetrexate therapy had minimal toxicity; transient neutropenia or thrombocytopenia occurred in 12 patients and mild elevation of serum aminotransferases in 4. We conclude that the combination of trimetrexate and leucovorin is safe and effective for the initial treatment of pneumocystis pneumonia in patients with AIDS and for the treatment of patients with intolerance or lack of response to standard therapies [1]. In noncomparative trials trimetrexate was effective in the treatment of P. carinii pneumonia (PCP) in patients with AIDS who were intolerant of or refractory to cotrimoxazole (trimethoprim/sulfamethoxazole) and pentamidine treatment. In these patients, 2- to 4-week survival rates of 48 to 69% were reported. In a comparative trial in the initial therapy of PCP, trimetrexate was less effective than cotrimoxazole in moderate to severe disease as evidenced by a significantly higher failure rate [2]. trimetrexate plus

leucovorin was effective, albeit inferior to TMP-SMZ, for moderately severe P. carinii pneumonia but was better tolerated than TMP-SMZ [3].

REFERENCES

[1]. Allegra CJ, et al. Trimetrexate for the treatment of Pneumocystis carinii pneumonia in patients with the acquired immunodeficiency syndrome. N Engl J Med. 1987 Oct 15;317(16):978-85.

[2]. Fulton B, et al. Trimetrexate. A review of its pharmacodynamic and pharmacokinetic properties and therapeutic potential in the treatment of Pneumocystis carinii pneumonia. Drugs. 1995 Apr;49(4):563-76.

[3]. Sattler FR, et al. Trimetrexate with leucovorin versus trimethoprim-sulfamethoxazole for moderate to severe episodes of Pneumocystis carinii pneumonia in patients with AIDS: a prospective, controlled multicenter investigation of the AIDS Clinical Trials Group Protocol 029/031. J Infect Dis. 1994 Jul;170(1):165-72.

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