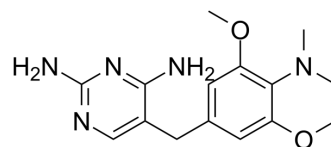


## Aditoprime

<b>Cat. No.:</b>	HY-139743
<b>CAS No.:</b>	56066-63-8
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>21</sub> N <sub>5</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	303.36
<b>Target:</b>	Bacterial; Antifolate
<b>Pathway:</b>	Anti-infection; Cell Cycle/DNA Damage
<b>Storage:</b>	4°C, stored under nitrogen, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (329.64 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		3.2964 mL	16.4821 mL	32.9641 mL
		<b>5 mM</b>		0.6593 mL	3.2964 mL	6.5928 mL
	<b>10 mM</b>		0.3296 mL	1.6482 mL	3.2964 mL	
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (8.24 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.24 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.24 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Aditoprime (Aditoprime), a selective bacterial dihydrofolate reductase (DHFR) inhibitor, inhibits the transformation of dihydrofolic acid to tetrahydrofolic acid. Aditoprime inhibits E.coli and L.casei DHFR with IC <sub>50</sub> of 47 and 520 nM, respectively. Aditoprime has a broad antimicrobial spectrum, good antibacterial activity and excellent pharmacokinetics <sup>[1][2][3]</sup> .
<b>In Vitro</b>	Aditoprime has the same antibacterial spectrum as TMP. Salmonella and Streptococcus from swine, E. coli and Salmonella from chickens, E. coli, Streptococcus, Mannheimia, and Pasteurella from calves, Streptococcus and Mannheimia from sheep, and E. coli, Flavobacterium columnare, A. baumannii and Y. ruckeri from fishes are highly susceptible to Aditoprime (MIC or MIC <sub>50</sub> ≤ 4 μg/mL) <sup>[1]</sup> .

---

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Aditoprime (Aditoprim) has longer elimination half-lives (3.3~14.8 h) and higher distribution volumes (4.6~10.4 L/kg) than those of Trimethoprim (TMP) in pig, calf, monkey, sheep and some other animal species, and a similar pattern is observed for Aditoprime where the distribution volume is about four times higher than that of TMP <sup>[1]</sup> . Aditoprime (10 -40 mg/kg; b.w.; intramuscularly) shows efficacy in infected swine (swine streptococcosis) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

---

## REFERENCES

---

- [1]. Then RL, et al. Properties of aditoprim, a new antibacterial dihydrofolate reductase inhibitor. Zentralbl Veterinarmed B. 1988;35(2):114-120.
- [2]. Cheng G, et al. The antibacterial activities of aditoprim and its efficacy in the treatment of swine streptococcosis. Sci Rep. 2017;7:41370. Published 2017 Feb 1.
- [3]. Wang X, et al. Two-generation reproduction and teratology studies of feeding aditoprim in Wistar rats. J Appl Toxicol. 2015;35(12):1531-1538.
- 

**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