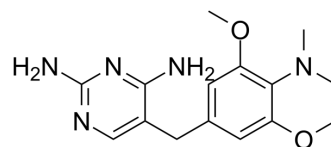


Aditoprime

Cat. No.:	HY-139743
CAS No.:	56066-63-8
Molecular Formula:	C ₁₅ H ₂₁ N ₅ O ₂
Molecular Weight:	303.36
Target:	Antifolate; Bacterial
Pathway:	Cell Cycle/DNA Damage; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Aditoprime (Aditoprim), a selective bacterial dihydrofolate reductase (DHFR) inhibitor, inhibits the transformation of dihydrofolic acid to tetrahydrofolic acid. Aditoprime inhibits <i>E. coli</i> and <i>L. casei</i> DHFR with IC ₅₀ of 47 and 520 nM, respectively. Aditoprime has a broad antimicrobial spectrum, good antibacterial activity and excellent pharmacokinetics ^{[1][2][3]} .
In Vitro	Aditoprime has the same antibacterial spectrum as TMP. <i>Salmonella</i> and <i>Streptococcus</i> from swine, <i>E. coli</i> and <i>Salmonella</i> from chickens, <i>E. coli</i> , <i>Streptococcus</i> , <i>Mannheimia</i> , and <i>Pasteurella</i> from calves, <i>Streptococcus</i> and <i>Mannheimia</i> from sheep, and <i>E. coli</i> , <i>Flavobacterium columnare</i> , <i>A. baumannii</i> and <i>Y. ruckeri</i> from fishes are highly susceptible to Aditoprime (MIC or MIC ₅₀ ≤ 4 µg/mL) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	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 ^[1] . Aditoprime (10 -40 mg/kg; b.w.; intramuscularly) shows efficacy in infected swine (swine streptococcosis) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Then RL, et al. Properties of aditoprime, a new antibacterial dihydrofolate reductase inhibitor. *Zentralbl Veterinarmed B.* 1988;35(2):114-120.
- [2]. Cheng G, et al. The antibacterial activities of aditoprime 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 aditoprime 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.

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