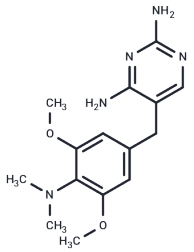
Data Sheet (Cat.No.T60699)

TargetMol

Aditoprime

Chemical Properties



CAS No. : 56066-63-8

Formula: C15H21N5O2

Molecular Weight: 303.36

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Aditoprime (Aditoprim) is a selective inhibitor of bacterial dihydrofolate reductase (DHFR) that exhibits potent enzymatic inhibition with IC50 values of 47 nM for Escherichia coli DHFR and 520 nM for Lactobacillus casei DHFR, Aditoprime functions by blocking the conversion of dihydrofolic acid to tetrahydrofolic acid.Aditoprime also demonstrate broad-spectrum antibacterial activity combined with favorable pharmacokinetic properties that support its use in antimicrobial research and drug development studies.
Targets(IC50)	DHFR
In vitro	**Method**: Antibacterial susceptibility testing was performed against bacterial isolates from swine, poultry, calves, sheep, and fish. **Result**: Aditoprime demonstrated broad antibacterial activity comparable to trimethoprim, with MIC or MIC_{50} values ≤ 4 μg/mL against multiple Gram-negative and Gram-positive pathogens[1].
In vivo	**Method**: Aditoprime was administered intramuscularly at doses of 10–40 mg/kg body weight in swine infected with Streptococcus, and pharmacokinetic parameters were evaluated across pigs, calves, monkeys, and sheep. **Result**: Aditoprime showed longer elimination half-lives (3.3–14.8 h), larger distribution volumes (4.6–10.4 L/kg), and effectively treated swine streptococcosis at 10–40 mg/kg. [1]

Solubility Information

Solubility	DMSO: 80 mg/mL (263.71 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2964 mL	16.4821 mL	32.9641 mL
5 mM	0.6593 mL	3.2964 mL	6.5928 mL
10 mM	0.3296 mL	1.6482 mL	3.2964 mL
50 mM	0.0659 mL	0.3296 mL	0.6593 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Then RL, et al. Properties of aditoprim, a new antibacterial dihydrofolate reductase inhibitor. Zentralbl Veterinarmed B. 1988;35(2):114-120.