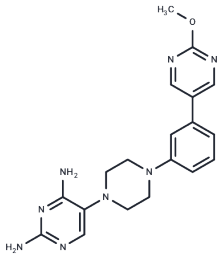
Data Sheet (Cat.No.T36692)

TargetMol

Fanotaprim

Chemical Properties



CAS No. : 2120282-75-7

Formula: C19H22N8O

Molecular Weight: 378.43

Storage: 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	Fanotaprim is a dihydrofolate reductase (DHFR) inhibitor, suppressing the growth of T. gondii strains with a TgDHFR IC50 of 1.57 ± 0.11 nM, a hDHFR IC50 of 308 ± 71 nM, and a hDHFR to TgDHFR selectivity ratio of 196.
Targets(IC50)	Antifolate,DHFR
In vitro	Fanotaprim exhibits parasiticidal and antiproliferative effects with EC50s of 13 and 7300 nM against the type I RH strain of T. gondii and MCF-7 cells, respectively[1]. It also inhibits the growth of T. gondii strains in vitro with EC50s ranging from 7.6 to 29.8 nM (GT1, ME49, CTG, RUB, and VAND)[1].
In vivo	Fanotaprim (1-10 mg/kg; p.o.; daily; beginning on day 1 through day 7) is highly effective in controlling acute infection by highly virulent strains of T. gondii in the murine model[1]. In mice, Fanotaprim (1 mg/kg; i.v.) shows CL, Vd, and t1/2 values of 10.6 mL/min/kg, 1.14 L/kg, and 3.9 hours, respectively[1]. When administered orally at 0.83 mg/kg, Fanotaprim exhibits F, Cmax, Tmax, and AUC0-last values of 47.3%, 178 ng/mL, 0.05 hours, and 750 ng h/mL, respectively[1].

Solubility Information

Solubility	DMSO: 25 mg/mL (66.06 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.28 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6425 mL	13.2125 mL	26.425 mL
5 mM	0.5285 mL	2.6425 mL	5.285 mL
10 mM	0.2642 mL	1.3212 mL	2.6425 mL
50 mM	0.0528 mL	0.2642 mL	0.5285 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

Hopper AT, et al. Discovery of Selective Toxoplasma gondii Dihydrofolate Reductase Inhibitors for the Treatment of Toxoplasmosis. J Med Chem. 2019;62(3):1562-1576.