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# Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

## Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand


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# Fanotaprim

**Cat. No.:** HY-137439

**CAS No.:** 2120282-75-7

**Molecular Formula:** $C_{19}H_{22}N_8O$

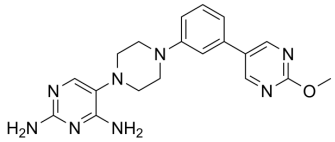
**Molecular Weight:** 378.43

**Target:** Antifolate

**Pathway:** Cell Cycle/DNA Damage

**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 : 33.33 mg/mL (88.07 mM; ultrasonic and warming and heat to 60°C)

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 2.6425 mL | 13.2125 mL | 26.4250 mL |
| 5 mM | 0.5285 mL | 2.6425 mL | 5.2850 mL |
| 10 mM | 0.2642 mL | 1.3212 mL | 2.6425 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: ≥ 2.08 mg/mL (5.50 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.50 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.50 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Fanotaprim is a dihydrofolate reductase (DHFR) inhibitor with $IC_{50}$s of 1.57 and 308 nM for tgDHFR (Toxoplasma gondii DHFR) and hDHFR (human DHFR), respectively. Fanotaprim has the potential for the research of toxoplasmosis[1].

**In Vitro**

Fanotaprim shows parasiticidal and antiproliferative effects with $EC_{50}$s of 13 and 7300 nM against the type I RH strain of T. gondii and MCF-7 cells, respectively[1].

Fanotaprim shows ability to inhibit the growth of T. gondii strains in vitro with $EC_{50}$s ranging 7.6~ 29.8 nM (GT1, ME49, CTG, RUB and VAND)[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**In Vivo**

Fanotaprim (1-10 mg/kg; p.o.; daily; beginning on day 1 through day 7) shows highly effective in control of acute infection by highly virulent strains of T. gondii in the murine model[1].

Fanotaprim (1mg/kg; i.v; mouse) shows $C_L$, $V_d$, and $t_{1/2}$ values of 10.6 mL/min/kg, 1.14 L/kg, and 3.9 hours, respectively[1].

Fanotaprim (0.83 mg/kg; p.o; mouse) shows F, $C_{max}$, $T_{max}$, and $AUC_{0\text{-}last}$ of 47.3%, 178 ng/mL, 0.05 hours and 750 ng h/mL, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

| | |
|---|---|
| Animal Model: | CD-1female mice (murine model of acute toxoplasmosis)[1] |
| Dosage: | 1-10 mg/kg |
| Administration: | p.o.; daily; beginning on day 1 through day 7 |
| Result: | Mice were monitored for survival for 30 days within termittent IVIS monitoring. At doses of 10 mg/kg Fanotaprim, q.d. or b.i.d. for 7 days, yielded 100% survival for 30 days. |

## REFERENCES

[1]. 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.



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