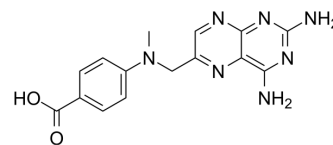


Methotrexate metabolite

Cat. No.:	HY-108251		
CAS No.:	19741-14-1		
Molecular Formula:	C ₁₅ H ₁₅ N ₇ O ₂		
Molecular Weight:	325.33		
Target:	Antifolate; Drug Metabolite; Dihydrofolate reductase (DHFR); Parasite		
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Anti-infection		
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 : 5 mg/mL (15.37 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.0738 mL	15.3690 mL	30.7380 mL
		5 mM	0.6148 mL	3.0738 mL	6.1476 mL
10 mM		0.3074 mL	1.5369 mL	3.0738 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: ≥ 2.5 mg/mL (7.68 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.68 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	<p>Methotrexate metabolite (DAMPA), the active metabolite of Methotrexate. Methotrexate is a folic acid antagonist that is widely used as an immunosuppressant and chemotherapeutic agent^[1]. Methotrexate metabolite is an antimalarial agent, which inhibits the parasite growth with an IC₅₀ of 446 nM against the antifolate-sensitive strain and 812 nM against the highly resistant strain under physiological folate conditions. Methotrexate metabolite is inactive against mammalian cells. Methotrexate metabolite is a minimal inhibitor of dihydrofolate reductase among metabolites of methotrexate^{[2][3]}.</p>
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CUSTOMER VALIDATION

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- Biotechnol Bioeng. 2021 Sep 3.

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REFERENCES

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- [3]. Schofield RC, et al. Development and validation of a turbulent flow chromatography and tandem mass spectrometry method for the quantitation of methotrexate and its metabolites 7-hydroxy methotrexate and DAMPA in serum. J Chromatogr B Analyt Technol Biomed Life Sci. 2015 Oct 1;1002:169-75.
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Caution: Product has not been fully validated for medical applications. For research use only.

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