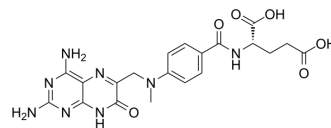


7-Hydroxymethotrexate

Cat. No.:	HY-130569
CAS No.:	5939-37-7
Molecular Formula:	C ₂₀ H ₂₂ N ₈ O ₆
Molecular Weight:	470.44
Target:	Drug Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	7-Hydroxymethotrexate is a major metabolite of Methotrexate (MTX; HY-14519). Methotrexate, an antimetabolite and antifolate agent, inhibits the enzyme dihydrofolate reductase, thereby preventing the conversion of folic acid into tetrahydrofolate, and inhibiting DNA synthesis ^{[1][2]} .	
In Vitro	7-Hydroxymethotrexate (7-OHMTX) has the affinity of DHFR markedly lower (>100-fold) than for Methotrexate (MTX) ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	7-Hydroxymethotrexate (4 mg/kg; IV) has a terminal half-life of 97.2 min and a total clearance value of 9.6 mL/min•mg ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Male Wistar rats (270-440 g) ^[1]
	Dosage:	4 mg/kg (Pharmacokinetic Analysis)
	Administration:	IV
	Result:	Had a terminal half-life of 97.2 min and a total clearance value of 9.6 mL/min•mg.

REFERENCES

[1]. L Fahrig, et al. Pharmacokinetics of methotrexate (MTX) and 7-hydroxymethotrexate (7-OH-MTX) in rats and evidence for the metabolism of MTX to 7-OH-MTX. *Cancer Chemother Pharmacol.* 1989;23(3):156-60.

[2]. Ping Guo, et al. Determination of methotrexate and its major metabolite 7-hydroxymethotrexate in mouse plasma and brain tissue by liquid chromatography-tandem mass spectrometry. *J Pharm Biomed Anal.* 2007 Apr 11;43(5):1789-95.

Caution: Product has not been fully validated for medical applications. For research use only.

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