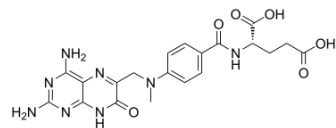


## 7-Hydroxymethotrexate

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



### BIOLOGICAL ACTIVITY

<b>Description</b>	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 <sup>[1][2]</sup> .
<b>In Vitro</b>	7-Hydroxymethotrexate (7-OHMTX) has the affinity of DHFR markedly lower (>100-fold) than for Methotrexate (MTX) <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	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 <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>Animal Model:</b>	Male Wistar rats (270-440 g) <sup>[1]</sup>
<b>Dosage:</b>	4 mg/kg (Pharmacokinetic Analysis)
<b>Administration:</b>	IV
<b>Result:</b>	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.

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

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