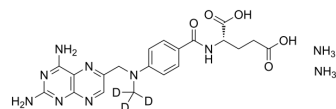


Methotrexate-d₃ diammonium

Cat. No.:	HY-14519S1
Molecular Formula:	C ₂₀ H ₂₅ D ₃ N ₁₀ O ₅
Molecular Weight:	491.52
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (101.73 mM; Need ultrasonic)

Concentration	Mass			
	1 mg	5 mg	10 mg	
1 mM	2.0345 mL	10.1725 mL	20.3451 mL	
5 mM	0.4069 mL	2.0345 mL	4.0690 mL	
10 mM	0.2035 mL	1.0173 mL	2.0345 mL	

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Methotrexate-d₃ diammonium is the deuterium labeled Methotrexate diammonium. Methotrexate (Amethopterin), an antimetabolite and antifolate agent, inhibits the enzyme dihydrofolate reductase, thereby preventing the conversion of folic acid into tetrahydrofolate, and inhibiting DNA synthesis. Methotrexate, also an immunosuppressant and antineoplastic agent, is used for the research of rheumatoid arthritis and a number of different cancers (such as acute lymphoblastic leukemia)^{[1][2][3]}.

REFERENCES

- [1]. Tian H, et al. Understanding the mechanisms of action of methotrexate: implications for the treatment of rheumatoid arthritis. Bull NYU Hosp Jt Dis. 2007;65(3):168-73.
- [2]. Swierkot J, et al. Methotrexate in rheumatoid arthritis. Pharmacol Rep. 2006 Jul-Aug;58(4):473-92.
- [3]. Ehab Tousson, et al. The Effect of L-carnitine on Amethopterin-induced Toxicity in Rat Large Intestine. Journal of Cancer Research and Treatment, 2014 2 (3), pp 55-63.

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

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