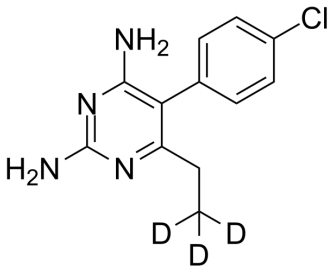
Pyrimethamine-d_3

Cat. No.:	HY-18062S
CAS No.:	1189936-99-9
Molecular Formula:	$C_{12}H_{10}D_3ClN_4$
Molecular Weight:	251.73
Target:	Antifolate; Parasite
Pathway:	Cell Cycle/DNA Damage; Anti-infection
Storage:	-20°C, stored under nitrogen, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 20 mg/mL (79.45 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.9725 mL	19.8626 mL	39.7251 mL
	5 mM	0.7945 mL	3.9725 mL	7.9450 mL
	10 mM	0.3973 mL	1.9863 mL	3.9725 mL

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

BIOLOGICAL ACTIVITY

Description

Pyrimethamine-d_3 is the deuterium labeled Pyrimethamine. Pyrimethamine is a medication used for protozoal infections; interferes with tetrahydrofolic acid synthesis from folic acid by inhibiting the enzyme dihydrofolate reductase (DHFR)[1][2].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

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

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Basco LK, et al. In vitro activity of pyrimethamine, cycloguanil, and other antimalarial drugs against African isolates and clones of Plasmodium falciparum. Am J Trop Med Hyg. 1994 Feb; 50(2):193-9.

[3]. Inceboz T, et al. Preparation of (131)I-Pyrimethamine and evaluation for scintigraphy of experimentally Toxoplasma gondii-infectedrats. J Drug Target. 2013

Feb;21(2):175-9.

[4]. Wright PD, et al. Screening for inhibitors of the SOD1 gene promoter: pyrimethamine does not reduce SOD1 levels in cell and animal models. Neurosci Lett. 2010 Oct 4;482(3):188-92.

[5]. Martins-Duarte ES, et al. Toxoplasma gondii: the effect of fluconazole combined with sulfadiazine and pyrimethamine against acute toxoplasmosis in murine model. Exp Parasitol. 2013 Mar;133(3):294-9.

[6]. Taylor WR, et al. Antimalarial drug toxicity: a review. Drug Saf. 2004;27(1):25-61.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA