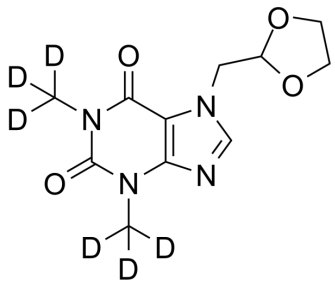
Doxofylline-d_6

Cat. No.:	HY-B0004S
CAS No.:	1219805-99-8
Molecular Formula:	$C_{11}H_8D_6N_4O_4$
Molecular Weight:	272.29
Target:	Phosphodiesterase (PDE); Adenosine Receptor
Pathway:	Metabolic Enzyme/Protease; GPCR/G Protein
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 : 50 mg/mL (183.63 mM; Need ultrasonic)
H2O : 25 mg/mL (91.81 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6726 mL	18.3628 mL	36.7255 mL
5 mM	0.7345 mL	3.6726 mL	7.3451 mL
10 mM	0.3673 mL	1.8363 mL	3.6726 mL

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

BIOLOGICAL ACTIVITY

Description

Doxofylline-d_6 is the deuterium labeled Doxofylline. Doxofylline is an antagonist of adenosine A1 receptor which also inhibits phosphodiesterase IV.

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]. Shukla D, et al. Doxofylline: a promising methylxanthine derivative for the treatment of asthma and chronic obstructive pulmonary disease. Expert Opin Pharmacother. 2009 Oct;10(14):2343-56.

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