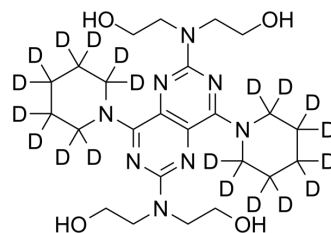


Dipyridamole-d₂₀

Cat. No.:	HY-B0312S		
CAS No.:	1189983-52-5		
Molecular Formula:	C ₂₄ H ₂₀ D ₂₀ N ₈ O ₄		
Molecular Weight:	524.75		
Target:	Phosphodiesterase (PDE)		
Pathway:	Metabolic Enzyme/Protease		
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 (95.28 mM)
 H₂O : 0.67 mg/mL (1.28 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM	1.9057 mL	9.5283 mL	19.0567 mL	
	5 mM	0.3811 mL	1.9057 mL	3.8113 mL	
	10 mM	0.1906 mL	0.9528 mL	1.9057 mL	

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

BIOLOGICAL ACTIVITY

Description

Dipyridamole-d₂₀ is the deuterium labeled Dipyridamole. Dipyridamole is a phosphodiesterase inhibitor that blocks uptake and metabolism of adenosine by erythrocytes and vascular endothelial cells[1][2][3].

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]. Klabunde, R.E., Dipyridamole inhibition of adenosine metabolism in human blood. *Eur J Pharmacol*, 1983. 93(1-2): p. 21-6.

[3]. Best, L.C., et al., Mode of action of dipyridamole on human platelets. *Thromb Res*, 1979. 16(3-4): p. 367-79.

[4]. Aktas, B., et al., Dipyridamole enhances NO/cGMP-mediated vasodilator-stimulated phosphoprotein phosphorylation and signaling in human platelets: in vitro and in vivo/ex vivo studies. *Stroke*, 2003. 34(3): p. 764-9.

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

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