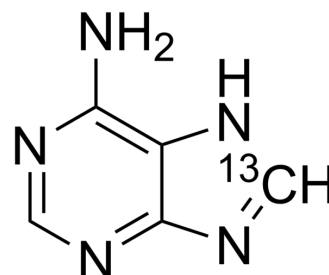


Adenine-13C

Cat. No.:	HY-B0152S1
CAS No.:	86967-48-8
Molecular Formula:	C ₄ ¹³ CH ₅ N ₅
Molecular Weight:	136.12
Target:	DNA/RNA Synthesis; Endogenous Metabolite
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 12.5 mg/mL (91.83 mM); ultrasonic and warming and heat to 60°C)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		7.3465 mL	36.7323 mL	73.4646 mL
		5 mM		1.4693 mL	7.3465 mL	14.6929 mL
	10 mM		0.7346 mL	3.6732 mL	7.3465 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1.25 mg/mL (9.18 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1.25 mg/mL (9.18 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 1.25 mg/mL (9.18 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Adenine- ¹³ C is the ¹³ C labeled Adenine[1]. Adenine (6-Aminopurine), a purine, is one of the four nucleobases in the nucleic acid of DNA. Adenine acts as a chemical component of DNA and RNA. Adenine also plays an important role in biochemistry involved in cellular respiration, the form of both ATP and the cofactors (NAD and FAD), and protein synthesis[2][3][4].
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 Feb;53(2):211-216.
- [2]. ORO J, et al. Synthesis of purines under possible primitive earth conditions. I. Adenine from hydrogen cyanide. *Arch Biochem Biophys*. 1961 Aug;94:217-27.
- [3]. Griffiths AJF, et al. *An Introduction to Genetic Analysis*. 7th edition. New York: W. H. Freeman 2000. Structure of DNA.
- [4]. Reader V. The assay of vitamin B(4). *Biochem J*. 193024(6):1827-31.
-

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

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