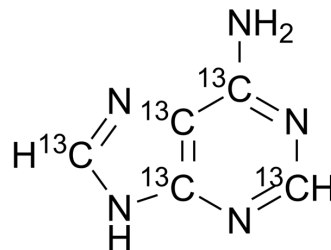


Adenine-¹³C₅

Cat. No.:	HY-B0152S3
Molecular Formula:	¹³ C ₅ H ₅ N ₅
Molecular Weight:	140.09
Target:	Isotope-Labeled Compounds; DNA/RNA Synthesis; Endogenous Metabolite
Pathway:	Others; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Adenine- ¹³ C ₅ (6-Aminopurine- ¹³ C ₅ ; Vitamin B4- ¹³ C ₅) is ¹³ C-labeled Adenine (HY-B0152). 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.
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*. 1930;24(6):1827-31.

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

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