
Product Data Sheet

Product Name: Adenine-13C

Cat. No.: GC68624

Chemical Properties

Cas. No. 86967-48-8

Formula $C_4^{13}CH_5N_5$ M.Wt 136.12

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

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].

Stable heavy isotopes of drogen, 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].

[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 drogen cyanide. *Arch Biochem Biops.* 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.

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