

Product Data Sheet

Product Name: N6-methyladenosine (m6A)

Cat. No.: GC14698

Chemical Properties

Cas. No. 1867-73-8

Chemical Name (2R,3S,4R,5R)-2-(hydroxymethyl)-5-(6-(methylamino)-9H-purin-9-yl)tetrahydrofuran-3,4-diol

SMILES CNC1=C(N=CN2[C@@]3([H])[C@@](O)([H])[C@@](O)([H])[C@@](O3)([H])CO)C2=N
C=N1

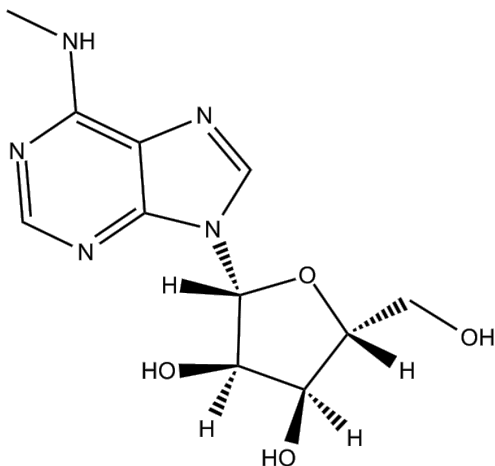
Formula $C_{11}H_{15}N_5O_4$ M.Wt 281.27

Solubility $\geq 12.2\text{mg/mL}$ in DMSO 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

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

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N6-methyladenosine (m6A) is a potential agonist of adenosine with an ED₅₀ value of 17250nM^[1]. N6-methyladenosine is the methylation occurring at the N6 position of adenine, and is the most common internal modification on eukaryotic mRNA^[2]. N6-methyladenosine regulates gene expression, thereby controlling a series of processes such as cell self-renewal, differentiation, invasion and apoptosis^[3]. A global decrease in N6-methyladenosine (m6A) results in double-stranded RNA (dsRNA) formation and a profound cell-intrinsic interferon response^[4]. The changes in N6-methyladenosine levels are closely related to the clinical and pathological features of gastrointestinal tumors and liver cancer. N6-methyladenosine has become a potential diagnostic and prognostic marker or a promising therapeutic target^[5].

References:

- [1] Ribeiro J A, Sebastião A M. On the type of receptor involved in the inhibitory action of adenosine at the neuromuscular junction[J]. British journal of pharmacology, 1985, 84(4): 911.
- [2] Chen M, Wong C M. The emerging roles of N6-methyladenosine (m6A) deregulation in liver carcinogenesis[J]. Molecular cancer, 2020, 19(1): 44.
- [3] He L, Li H, Wu A, et al. Functions of N6-methyladenosine and its role in cancer[J]. Molecular cancer, 2019, 18(1): 176.
- [4] Guirguis A A, Ofir-Rosenfeld Y, Knezevic K, et al. Inhibition of METTL3 results in a cell-intrinsic interferon response that enhances antitumor immunity[J]. Cancer Discovery, 2023, 13(10): 2228-2247.
- [5] Zhu D H, Su K K, Ou-Yang X X, et al. Mechanisms and clinical landscape of N6-methyladenosine (m6A) RNA modification in gastrointestinal tract cancers[J]. Molecular and Cellular Biochemistry, 2024, 479(7): 1553-1570.

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