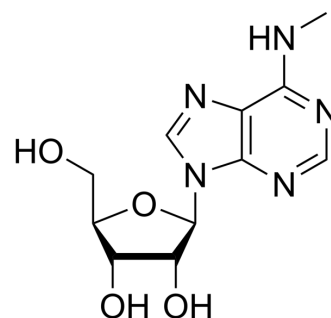


N6-Methyladenosine

Cat. No.:	HY-N0086		
CAS No.:	1867-73-8		
Molecular Formula:	C ₁₁ H ₁₅ N ₅ O ₄		
Molecular Weight:	281.27		
Target:	Influenza Virus; Endogenous Metabolite		
Pathway:	Anti-infection; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 31 mg/mL (110.21 mM)
 H₂O : 5.56 mg/mL (19.77 mM); ultrasonic and warming and heat to 60°C
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.5553 mL	17.7765 mL	35.5530 mL
	5 mM	0.7111 mL	3.5553 mL	7.1106 mL
	10 mM	0.3555 mL	1.7777 mL	3.5553 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (7.40 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (7.40 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (7.40 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

N6-Methyladenosine is the most prevalent internal (non-cap) modification present in the messenger RNA (mRNA) of all higher eukaryotes. N6-Methyladenosine can modify viral RNAs and has antiviral activities.

IC₅₀ & Target

Microbial Metabolite

Human Endogenous Metabolite

In Vitro

N6-methyladenosine (m6A) is selectively recognized by the human YTH domain family 2 (YTHDF2) protein to regulate mRNA degradation. N6-methyladenosine (m6A), a prevalent internal modification in the messenger RNA of all eukaryotes, is post-transcriptionally installed by m6A methyltransferase (e.g., MT-A70) within the consensus sequence of G(m6A)C (70%) or A(m6A)C (30%). N6-methyladenosine (m6A)-containing RNAs are greatly enriched in the YTHDF-bound portion and diminished in the flow-through portion^[1]. N6-methyladenosine (m6A), the most abundant internal RNA modification, functions in diverse biological processes, including regulation of embryonic stem cell self-renewal and differentiation. N6-methyladenosine (m6A) is a large protein complex, consisting in part of methyltransferase-like 3 (METTL3) and methyltransferase-like 14 (METTL14) catalytic subunits^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Commun. 2023 Mar 27;14(1):1694.
- Nucleic Acids Res. 2021 Oct 29;gkab989.
- Talanta. 22 May 2023, 124697
- bioRxiv. 2023 Mar 16.

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REFERENCES

- [1]. Wang X, et al. N6-methyladenosine-dependent regulation of messenger RNA stability. *Nature*. 2014 Jan 2;505(7481):117-20.
- [2]. Li Y, et al. Genome-wide detection of high abundance N6-methyladenosine sites by microarray. *RNA*. 2015 Aug;21(8):1511-8.
- [3]. Dang W, et al. N6-Methyladenosine and Viral Infection. *Front Microbiol*. 2019 Mar 5;10:417.

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

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