

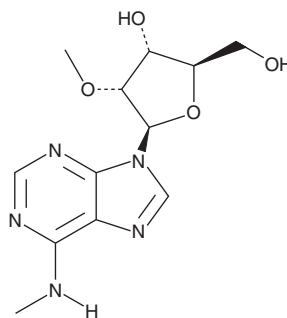
PRODUCT INFORMATION



N⁶,2'-O-Dimethyladenosine

Item No. 45570

CAS Registry No.: 57817-83-1
Formal Name: N-methyl-2'-O-methyl-adenosine
Synonyms: m⁶Am, N⁶,2'-O-Dimethyladenosine
MF: C₁₂H₁₇N₅O₄
FW: 295.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

N⁶,2'-O-Dimethyladenosine (m⁶Am) is supplied as a solid. A stock solution may be made by dissolving the (m⁶Am) in the solvent of choice, which should be purged with an inert gas. m⁶Am is slightly soluble (0.1-1 mg/ml) in ethanol, DMSO, and PBS (pH 7.2).

Description

m⁶Am is a modified nucleoside, a substrate of the demethylase fat mass and obesity-associated protein (FTO), and an mRNA cap modification that increases mRNA stability.^{1,2} It is present on specific transcripts, including fatty acid binding protein 2 (*Fabp2*) and *Fabp5*, in an obesity-dependent manner, where it is present on mRNA of wild-type but not *ob/ob* or high-fat diet-fed mice.¹ Brain levels of m⁶Am are decreased in the cortex, subcortex, and cerebellum of adult rats exposed to alcohol during adolescence, while serum levels of m⁶Am are increased in patients with colorectal or gastric cancer.^{2,3}

References

1. Ben-Haim, M. S., Pinto, Y., Moshitch-Moshkovitz, S., *et al.* Dynamic regulation of N⁶,2'-O-dimethyladenosine (m⁶Am) in obesity. *Nat. Commun.* **12**(1), 7185 (2021).
2. Hu, Y., Fang, Z., Mu, J., *et al.* Quantitative analysis of methylated adenosine modifications revealed increased levels of N⁶-Methyladenosine (m⁶A) and N⁶,2'-O-Dimethyladenosine (m⁶Am) in serum from colorectal cancer and gastric cancer patients. *Front. Cell Dev. Biol.* **9**, 694673 (2021).
3. Chen, Y.-Y., Gui, Z., Hu, D., *et al.* Adolescent alcohol exposure changes RNA modifications in adult brain by mass spectrometry-based comprehensive profiling analysis. *Chinese Chem. Lett.* **35**(1), 108522 (2023).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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