

PRODUCT INFORMATION



1-Methyladenosine-d₃ (hydriodide)

Item No. 44021

Formal Name: (2R,3S,4R,5R)-2-(hydroxymethyl)-5-(6-imino-1-(methyl-d₃)-1,6-dihydro-9H-purin-9-yl)tetrahydrofuran-3,4-diol, monohydriodide

Synonyms: m¹A-d₃, 1-methyl Ado-d₃

MF: C₁₁H₁₂D₃N₅O₄ • HI

FW: 412.2

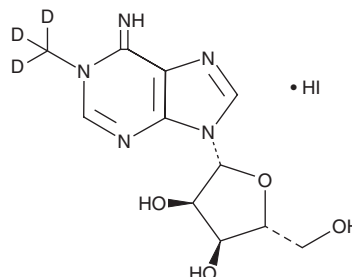
Chemical Purity: ≥95% (1-Methyladenosine)

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

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

1-Methyladenosine-d₃ (hydriodide) is intended for use as an internal standard for the quantification of 1-methyladenosine (Item No. 16937) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

1-Methyladenosine-d₃ (hydriodide) is supplied as a solid. A stock solution may be made by dissolving the 1-methyladenosine-d₃ (hydriodide) in the solvent of choice, which should be purged with an inert gas. 1-Methyladenosine-d₃ (hydriodide) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 1-methyladenosine-d₃ (hydriodide) in these solvents is approximately 20 and 5 mg/ml, respectively.

Description

1-Methyladenosine is a modified nucleoside generated by the processing of tRNA by methyltransferases.¹⁻³ Urine and serum levels of 1-methyladenosine are elevated in several forms of cancer.⁴⁻⁷ Urine levels of 1-methyladenosine also increase during active rheumatoid arthritis.⁸

References

1. Munns, T.W. and Sims, H.F. *J. Biol. Chem.* **250**(6), 2143-2149 (1975).
2. Vold, B. *J. Bacteriol.* **127**(1), 258-267 (1976).
3. Chujo, T. and Suzuki, T. *RNA* **18**(12), 2269-2276 (2012).
4. Reynaud, C., Bruno, C., Boullanger, P., et al. *Cancer Lett.* **255-262** (1991).
5. Seidel, A., Brunner, S., Seidel, P., et al. *Br. J. Cancer* **94**(11), 1726-1733 (2006).
6. Hsu, W.-Y., Chen, C.-J., Huang, Y.-C., et al. *PLoS One* **8**(12), 1-8 (2013).
7. Chen, F., Xue, J., Zhou, L., et al. *Anal. Bioanal. Chem.* **401**(6), 1899-1904 (2011).
8. Tebib, J.G., Reynaud, C., Cedoz, J.P., et al. *Br. J. Rheumatol.* **36**(9), 990-995 (1997).

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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