

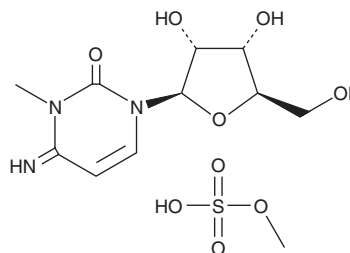
PRODUCT INFORMATION



3-Methylcytidine (methosulfate)

Item No. 21064

CAS Registry No.: 21028-20-6
Formal Name: 3-methyl-cytidine, mono(methyl sulfate) salt
MF: $C_{10}H_{15}N_3O_5 \cdot CH_4SO_4$
FW: 369.3
Purity: $\geq 95\%$
UV/Vis.: λ_{max} : 211, 278 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

3-Methylcytidine (methosulfate) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-methylcytidine (methosulfate) in the solvent of choice. 3-Methylcytidine (methosulfate) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 3-methylcytidine (methosulfate) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 3-methylcytidine (methosulfate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 3-methylcytidine (methosulfate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

3-Methylcytidine (methosulfate) is a cytidine derivative used as an internal standard for HPLC. 3-Methylcytidine is a common epigenetic modification in tRNA but its role in the cell has not been defined.¹ 3-Methylcytidine has been investigated as a potential biomarker for cancer and was significantly elevated in the urine of breast cancer patients.²

References

1. D'Silva, S., Haider, S.J., and Phizicky, E.M. A domain of the actin binding protein Abp140 is the yeast methyltransferase responsible for 3-methylcytidine modification in the tRNA anti-codon loop. *RNA* **17**(6), 1100-1110 (2011).
2. Hsu, W. Y., Chen, C.J., Huang, Y.C. *et al.* Urinary nucleosides as biomarkers of breast, colon, lung, and gastric cancer in Taiwanese. *PLoS One* **8**(12), 1-8 (2013).

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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