

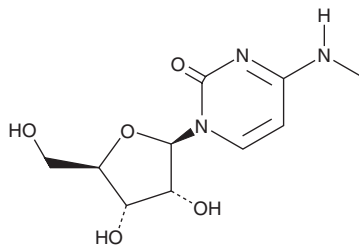
PRODUCT INFORMATION



N⁴-Methylcytidine

Item No. 40907

CAS Registry No.: 10578-79-7
Formal Name: N-methyl-cytidine
Synonyms: m⁴C, NSC 518744
MF: C₁₀H₁₅N₃O₅
FW: 257.2
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

N⁴-Methylcytidine is supplied as a solid. A stock solution may be made by dissolving the N⁴-methylcytidine in the solvent of choice, which should be purged with an inert gas. N⁴-Methylcytidine is slightly soluble (0.1-1 mg/ml) in methanol.

N⁴-Methylcytidine is slightly soluble (0.1-1 mg/ml) in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

N⁴-Methylcytidine is a pyrimidine nucleoside and derivative of cytidine (Item No. 29602).¹ It is found in mammalian mitochondrial rRNA where it stabilizes the structure of 12S rRNA and is essential for mitochondrial translation of oxidative phosphorylation-related proteins. N⁴-Methylcytidine maintains normal base pairing with the purine base guanine (Item No. 34248) in RNA oligomers.²

References

1. Van Haute, L., Hendrick, A.G., D'Souza, A.R., *et al.* METTL15 introduces N4-methylcytidine into human mitochondrial 12S rRNA and is required for mitoribosome biogenesis. *Nucleic Acids Res.* **47**(19), 10267-10281 (2019).
2. Mao, S., Sekula, B., Ruskowski, M., *et al.* Base pairing, structural and functional insights into N⁴-methylcytidine (m⁴C) and N⁴,N⁴-dimethylcytidine (m⁴₂C) modified RNA. *Nucleic Acids Res.* **48**(18), 10087-10100 (2020).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 06/06/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM