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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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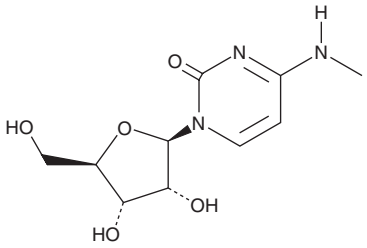
PRODUCT INFORMATION

N^4-Methylcytidine

Item No. 40907

CAS Registry No.:	10578-79-7
Formal Name:	N-methyl-cytidine
Synonyms:	m^4C, NSC 518744
MF:	$C_{10}H_{15}N_3O_5$
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

N^4-Methylcytidine is supplied as a solid. A stock solution may be made by dissolving the N^4-methylcytidine in the solvent of choice, which should be purged with an inert gas. N^4-Methylcytidine is slightly soluble (0.1-1 mg/ml) in methanol.

N^4-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

N^4-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. N^4-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., Ruszkowski, M., *et al.* Base pairing, structural and functional insights into *N*^{4}-methylcytidine (m^4C) and *N*^{4},*N*^{4}-dimethylcytidine ($m^4{}_2C$) modified RNA. *Nucleic Acids Res.* **48(18)**, 10087-10100 (2020).

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