

N4-Methylcytidine

Chemical Properties

CAS No. : 10578-79-7

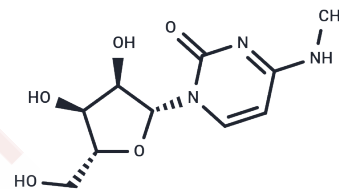
Formula: C₁₀H₁₅N₃O₅

Molecular Weight: 257.24

Keep away from direct sunlight

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	N4-Methylcytidine (Nsc518744) is a cytidine nucleoside analog that belongs to a class of compounds capable of inhibiting DNA methyltransferases, similar to other cytidine analogs such as Zebularine. N4-Methylcytidine demonstrates potential anti-metabolic and antitumor activities, making it a valuable research tool for studying epigenetic regulation, DNA methylation dynamics, and cancer-associated metabolic reprogramming.
Targets(IC50)	DNA
In vitro	In enzymatic studies of DNA Methyltransferases (DNMTs), N4-Methylcytidine served as a structural probe. Unlike covalent inhibitors, modifications at the N4 position altered chemical interactions within the catalytic pocket, providing experimental data on enzyme recognition and base-pairing properties necessary for inhibition [1].

Solubility Information

Solubility	DMSO: 40 mg/mL (155.5 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8874 mL	19.4371 mL	38.8742 mL
5 mM	0.7775 mL	3.8874 mL	7.7748 mL
10 mM	0.3887 mL	1.9437 mL	3.8874 mL
50 mM	0.0777 mL	0.3887 mL	0.7775 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Gowher H, et al. Mechanism of inhibition of DNA methyltransferases by cytidine analogs in cancer therapy. *Cancer Biol Ther.* 2004 Nov;3(11):1062-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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