Product Data Sheet

Product Name: 5-Methylcytidine
Cat. No.: GC33526

Chemical Properties

Cas. No.	2140-61-6		
SMILES	OC[C@@H]1[C@H]([C@H]([C@H](N2C(N=C(C(C)=C2)N)=O)O1)O)O		
Formula	$C_{10}H_{15}N_3O_5$	M.Wt	257.24
Solubility	DMF: 10 mg/ml,DMSO: 20 mg/ml,PBS (pH 7.2): 10 mg/ml	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	5-Methylcytidine		

Background

5-Methylcytidine is a modified nucleoside derived from 5-methylcytosine and is a minor constituent of RNA as well as DNA for certain organisms.[1,2] Roughly one to two residues of 5-methylcytidine occur in every 1,000 RNA residues.[3] It has been used in epigenetics research, especially in studies involving DNA methylation processes involved in the establishment of genomic imprinting and in the control of gene expression and differentiation.[4]

1.Edelheit, S., Schwartz, S., Mumbach, M.R., et al.Transcriptome-wide mapping of 5-methylcytidine RNA modifications in bacteria, archaea, and yeast reveals m5C within archaeal mRNAsPLoS Genetics9(6)e1003602(2013) 2.Mahto, S.K., and Chow, C.S.Probing the stabilizing effects of modified nucleotides in the bacterial decoding region of 16S ribosomal RNABioorg. Med. Chem.21(10)2720-2726(2013) 3.Guntaka, R.V., Katz, R.A., Weiner, A.J., et al.Effect of 5-methylcytidine on virus production in avian sarcoma virus-infected chicken embryo cellsJ. Virol.29(2)475-482(1979) 4.Zhu, R., Howorka, S., Pr?ll, J., et al.Nanomechanical recognition measurements of individual DNA molecules reveal

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epigenetic methylation patternsNat. Nanotechnol.5(11)788-791(2010)

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