Data Sheet (Cat.No.TNU0124)

TargetMol

2'-O-Methyl-5-methylcytidine

Chemical Properties

CAS No. :	113886-70-7
Formula:	C11H17N3O5
Molecular Weight:	271.27
Storage:	Keep away from direct sunlight,Keep away from moisture,Store at low temperature 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	2'-O-Methyl-5-methylcytidine is a naturally occurring modified nucleoside found in tRNA that features methylation at both the ribose 2'-hydroxyl position and the cytosine 5-position, conferring enhanced stability and potential antiviral and anticancer properties, 2'-O-Methyl-5-methylcytidine is widely used as a phosphoramidite building block for synthesizing modified RNA in drug discovery and structural biology research.
Targets(IC50)	Others
In vitro	In RNA structural studies, 2'-O-Methyl-5-methylcytidine modification locked the ribose in the C3'-endo conformation. This modification provided steric shielding against RNase hydrolysis and increased hydrophobicity for enhanced base stacking. Collectively, these effects resulted in an increase in the melting temperature (Tm) of RNA duplexes by 0.5 to 1.3°C per modification [1].

Solubility Information

Solubility	DMSO: 40 mg/mL (147.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6864 mL	18.4318 mL	36.8636 mL
5 mM	0.7373 mL	3.6864 mL	7.3727 mL
10 mM	0.3686 mL	1.8432 mL	3.6864 mL
50 mM	0.0737 mL	0.3686 mL	0.7373 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

Karikó K, et al. Suppression of RNA recognition by Toll-like receptors: the impact of nucleoside modification and the evolutionary origin of RNA[J]. Immunity, 2005, 23(2): 165-175.
Deleavey G F, et al. Designing chemically modified oligonucleotides for targeted gene silencing[J]. Chemistry & biology, 2012, 19(8): 937-954.