

BOC Sciences®

<https://nucleotech.bocsci.com/>



Nucleosides & Nucleotides



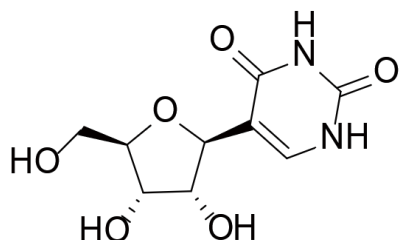
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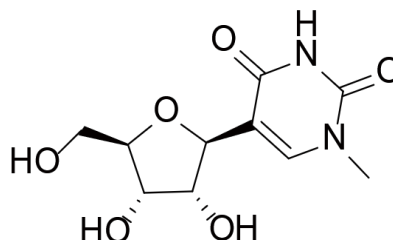


Our superstars – PseudoUridine & N1-MethylpseudoUridine

BOC Sciences has strong capabilities in design, development, synthesis and production of nucleosides and nucleotides. Our skilled and experienced team is capable of providing the products in scales ranging from milligram, kilogram to hundreds kilogram quantities.



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PseudoUridine

CAS 1445-07-4

Purity: ≥ 99%

Annual output over 500 kg

N1-MethylpseudoUridine

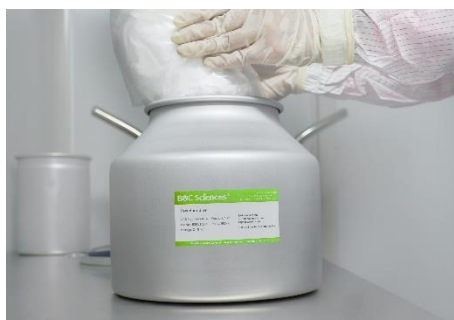
CAS 13860-38-3

Purity: ≥ 99%

Annual output over 1000 kg

Competitive Advantages:

- Guaranteed quality
- Competitive price
- Timely delivery
- Sufficient stock for catalog products
- Flexible packing options from vials to drums



PseudoUridine modification plays an important role in multiple biological processes. PseudoUridine modification could fine tune RNA functions for specific RNA species. For example, PseudoUridine in mRNA can affect mRNA splicing, stability and translation. In recent years, the role of pseudoUridine derivatives in the biological process has also been extensively studied. An example is that N1-methylpseudoUridine substituted mRNA can enhance protein expression and reduce immunogenicity with a more superior effect than PseudoUridine-incorporated mRNA.

PseudoUridine derivatives

Base modified pseudoUridine

Name	CAS No.
3-(3-Amino-3-Carboxypropyl)-1-MethylpseudoUridine	52777-29-4
1,3-DimethylpseudoUridine	64272-68-0
1,3-Dimethyl-2'-DeoxypseudoUridine	65358-16-9
3-MethylpseudoUridine	81691-06-7
1-MethylpseudoUridine	13860-38-3
N1-BenzylpseudoUridine	1613530-22-5
N1-EthylpseudoUridine	1613529-72-8
2-ThiopseudoUridine	59464-18-5
N1-(1,1-Difluoroethyl)pseudoUridine	N/A
N1-(1,1,1-Trifluoroethyl)pseudoUridine	1613529-80-8
N1-MethylsulfonylpseudoUridine	N/A
N1-(2-Methyl)propylpseudoUridine	N/A
N1-MethoxymethylpseudoUridine	N/A
N1,N3-Bis(cyanomethyl)pseudoUridine	N/A
N1-CyanomethylpseudoUridine	N/A
N1-Ethoxymethyl pseudoUridine	2131744-33-5

2'-modified pseudoUridine

Name	CAS No.
2'-O-MethylpseudoUridine	2140-68-3

Phosphoramidite pseudoUridine

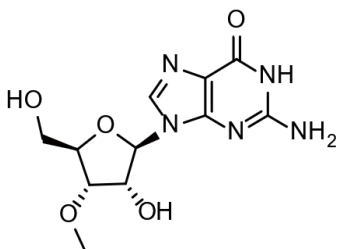
Base	CAS No.
5'-DMT-PseudoUridine	144429-55-0
5'-DMT-2'-O-TBDMS-PseudoUridine	144429-56-1
5'-DMT-2'-O-TBDMS-PseudoUridine-CE-Phosphoramidite	163496-23-9
5'-DMT-3'-O-TBDMS-PseudoUridine	144429-58-3
5'-DMT-3'-O-TBDMS-PseudoUridine-CE-Phosphoramidite	N/A
5'-DMT-N1-Methyl-PseudoUridine	875302-39-9
5'-DMT-2'-O-TBDMS-N1-Methyl-PseudoUridine	875302-41-3
5'-DMT-2'-O-TBDMS-N1-Methyl-PseudoUridine-CE-Phosphoramidite	875302-45-7
5'-DMT-3'-O-TBDMS-N1-Methyl-PseudoUridine	875302-43-5
5'-DMT-3'-O-TBDMS-N1-Methyl-PseudoUridine-CE-Phosphoramidite	875302-47-9
5'-DMT-2'-O-Me-PseudoUridine-CE-Phosphoramidite	N/A
5'-DMT-2'-O-Me-N1-Methyl-PseudoUridine-CE-Phosphoramidite	N/A

Other Key Nucleosides

These modified nucleosides play an extremely important role in the expression of biological functions of nucleic acids. Therefore, the existence of rare nucleosides has attracted the massive attention in academia and industrials. The correlated research in the field of vaccine and cancer is getting more funded and recognized.

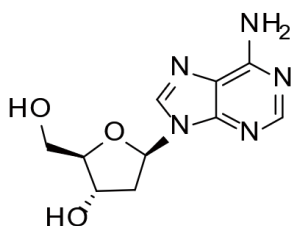
3'-O-Methylguanosine

10300-27-3



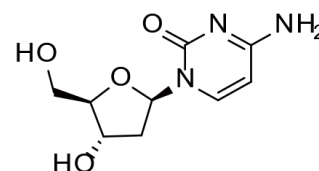
2'-Deoxyadenosine

958-09-8



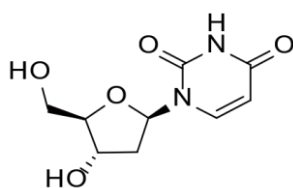
2'-Deoxycytidine

951-77-9



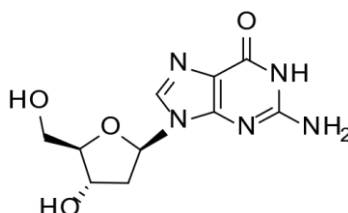
2'-Deoxyuridine

951-78-0



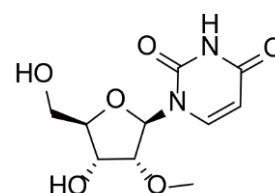
2'-Deoxyguanosine

961-07-9



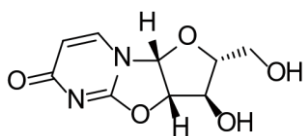
2'-O-Methyluridine

2140-76-3



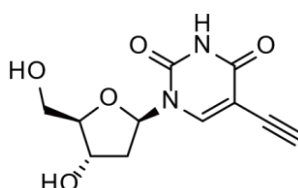
2,2'-Cyclouridine

3736-77-4



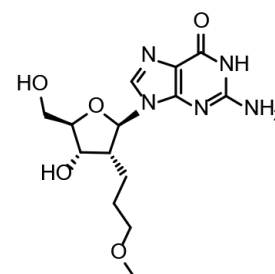
5-Ethynyl-2'-Deoxyuridine

61135-33-9



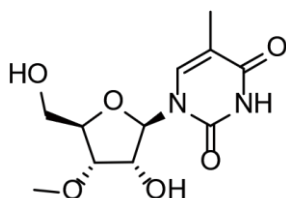
3'-O-(2-Methoxyethyl)guanosine

256224-03-0



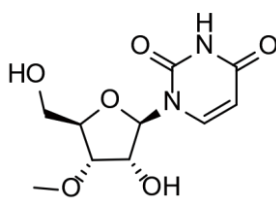
3'-O-Methyl-5-methyluridine

2305415-87-4



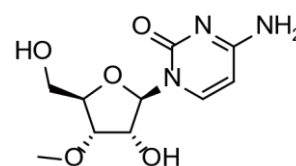
3'-O-Methyluridine

6038-59-1



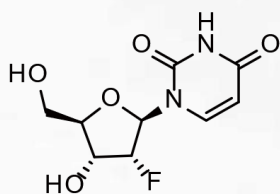
3'-O-Methylcytidine

20594-00-7



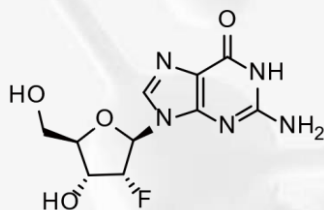
2'-Deoxy-2'-Fluorouridine

784-71-4



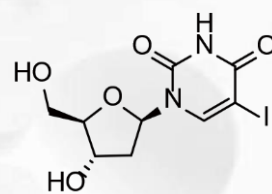
2'-Deoxy-2'-Fluoroguanosine

78842-13-4



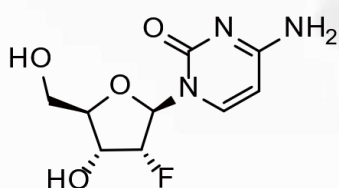
5-Iodo-2'-Deoxyuridine

54-42-2



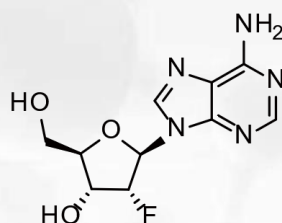
2'-Deoxy-2'-Fluorocytidine

10212-20-1



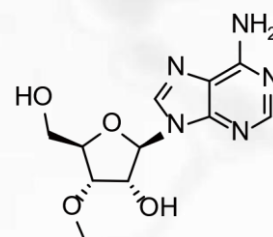
2'-Fluoro-2'-Deoxyadenosine

64183-27-3



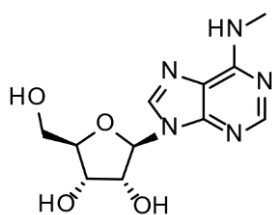
3'-O-Methyladenosine

10300-22-8



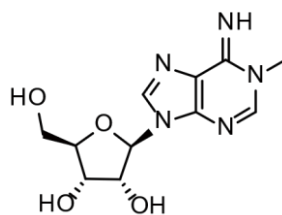
N6-Methyladenosine

1867-73-8



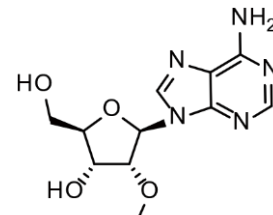
1-Methyladenosine

15763-06-1



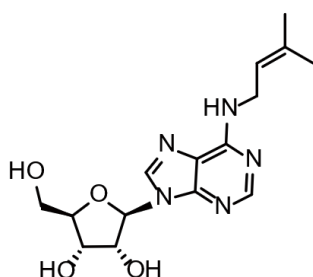
2'-O-Methyladenosine

2140-79-6



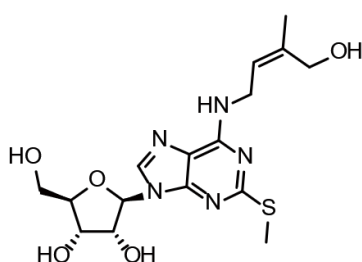
N6-(3-Methyl-2-Butenyl)Adenosine

7724-76-7



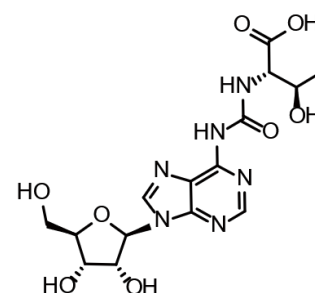
2-Methylthio-N6-(4-Hydroxy-3-Methylbut-2-Enyl)Adenosine

52049-48-6



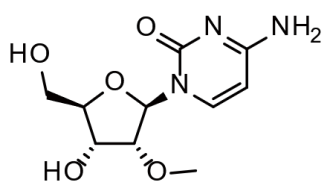
N6-Threonylcarbamoyl adenosine

24719-82-2



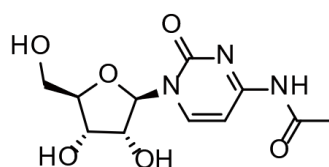
2'-O-Methylcytidine

2140-72-9



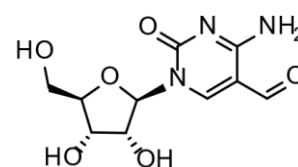
N4-Acetylcytidine

3768-18-1



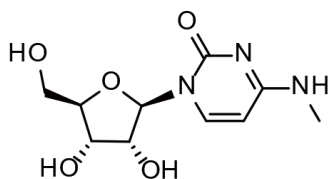
5-Formylcytidine

148608-53-1

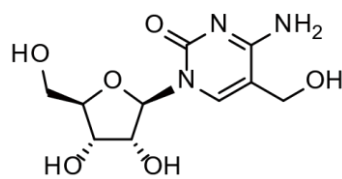


N4-Methylcytidine

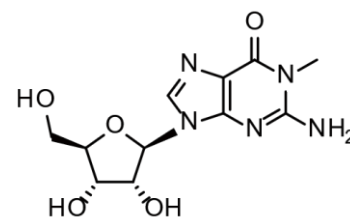
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**5-Hydroxymethylcytidine**

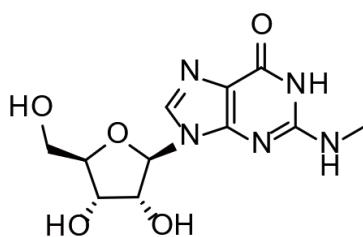
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**1-Methylguanosine**

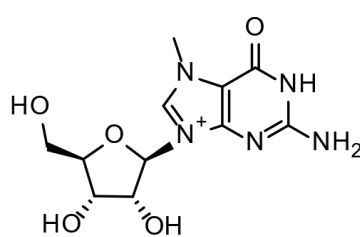
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**N2-Methylguanosine**

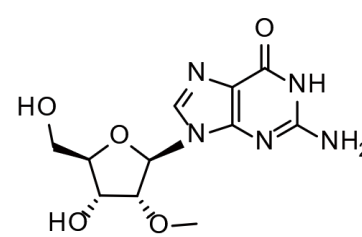
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**7-Methylguanosine**

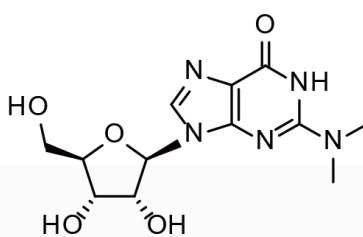
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**2'-O-Methylguanosine**

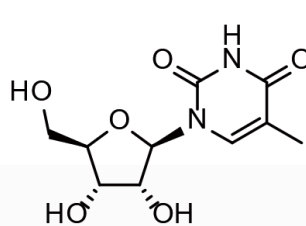
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**N,N-Dimethylguanosine**

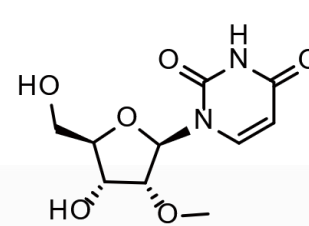
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**5-Methyluridine**

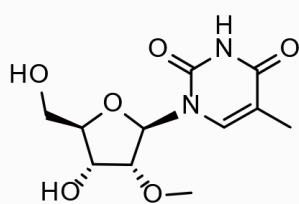
1463-10-1

**2'-O-Methyluridine**

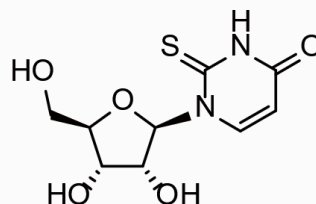
2140-76-3

**2'-O-Methyl-5-Methyluridine**

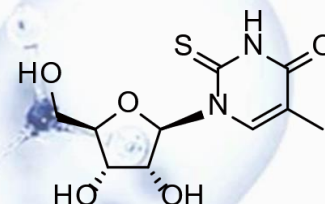
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**2-Thiouridine**

20235-78-3

**5-Methyl-2-Thiouridine**

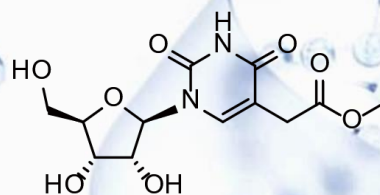
32738-09-3

**5-Hydroxyuridine**

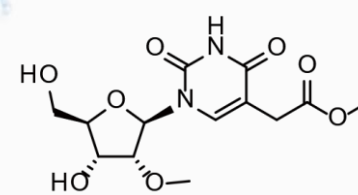
957-77-7

**5-Methoxycarbonylmethyluridine**

29428-50-0

**5-Methoxycarbonylmethyl-2'-O-Methyluridine**

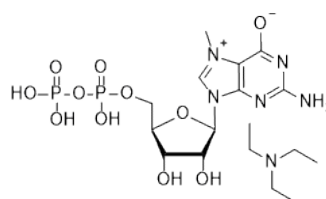
60197-31-1



Nucleotides

Key Nucleotide - m7GDP

m7GDP (CAS 117723-13-4) is a building block used in the synthesis of mRNA cap analogues. It can be used to study the structure, functions and metabolism of mRNA 5'-cap structures. Now, It's the raw material used in the cap analogs synthesis to the 5' end of the mRNA vaccines. Besides, the regulatory role of m7GDP in mRNA metabolic pathways has important implications. It can effectively inhibit cap-dependent translation and decapping. Our annual output of m7GDP is over 50 kg.



m7GDP [TEA Salt]
117723-13-4 (free acid)
Purity: ≥ 97%
Annual output over 50 kg

Other Modified Nucleotides

Name	CAS No.	Structure
Pseudo-UTP Pseudouridine-5'-triphosphate, Sodium salt	1175-34-4	
N1-Methylpseudo-UTP N1-Methylpseudouridine-5'-triphosphate, Sodium salt	1428903-59-6	
5-Methoxy-UTP 5-Methoxyuridine-5'-triphosphate Lithium salt	847649-65-4	
5-methyl-CTP 5-Methylcytidine s' triphosphate Sodium salt	327174-86-7	
5-Methyl-UTP 5-methyluridine 5'-triphosphate	23198-01-8	

***The products above are all free of DNase and RNase contamination and all have been performance tested in transcription reaction.

For more triphosphate products, please check the link as follows.

 <https://www.bocsci.com/nucleotides-list-2001.html>

- For some special modified triphosphate products, we also provide custom synthesis services.



Scale up capability

BOC Sciences with 3 Million sq.ft of facility area, has established powerful synthesis and fermentation platforms to produce high-quality chemicals.



BOC Sciences provides CDMO services for GMP grade products. Our facilities are US and EU GMP compliant and have passed US FDA inspection. Our manufacturing sites are equipped with hundreds of fermentors, reactors and multiple purification workshops.

GMP capability:

- kg to MT scale
- Cleanroom Class 100 to Class 100,000,
- HPAPI production with OEL < 1 $\mu\text{g}/\text{m}^3$



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