



Ribonucleoside Triphosphate (NTP) Solutions

2'-Fluorine-Nucleoside-
5'-Triphosphate Solutions,

Biotin-16-UTP Solution,
ATP Solution

NTP Solutions (1 tube each ATP, CTP, GTP, UTP)

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1. Introduction

Both unmodified and modified Ribonucleoside-5'-Triphosphate (NTPs) meet strict spectrophotometric criteria and are rigorously tested in functional assays with our RNA Polymerases.

NTPs are provided as sterile, pH neutral solutions of ATP, CTP, GTP, or UTP, each at a concentration of 100 mM.

2'-Fluorine-Nucleoside-5'-Triphosphates are provided as sterile, neutral solutions of 2'-Fluorine-dCTP or 2'-Fluorine-dUTP, each at a concentration of 50 mM.

Biotin-16-UTP* is a biologically active analog of uridine-5'-triphosphate that is readily incorporated into RNA during an *in vitro* transcription reaction by RNA polymerases such as phage T7 RNA Polymerase.

ATP Solution. ATP is provided as a sterile, pH neutral 100 mM solution. ATP is suitable for use as a cofactor with T4 DNA Ligase and T4 Polynucleotide kinase. This ATP solution can also be used in RNA-tailing applications.

2. Product Specifications

Storage: Store only at -20°C in a freezer without a defrost cycle.

Storage Solution: Nucleotide solutions are provided in sterile deionized water and adjusted to pH 7.0 with NaOH.

3. Nucleotide Solutions

ATP (Adenosine-5'-triphosphate)

Formula (free acid)..... $C_{10}H_{16}N_5O_{13}P_3$
 Formula weight.....507
 $A_{250} / A_{260} = 0.80$ $A_{280} / A_{260} = 0.14$

CTP (Cytidine-5'-triphosphate)

Formula (free acid)..... $C_9H_{16}N_3O_{14}P_3$
 Formula weight.....483
 $A_{250} / A_{260} = 0.44$ $A_{280} / A_{260} = 2.03$

GTP (Guanosine-5'-triphosphate)

Formula (free acid)..... $C_{10}H_{16}N_5O_{14}P_3$
 Formula weight.....523
 $A_{250} / A_{260} = 1.14$ $A_{280} / A_{260} = 0.65$

UTP (Uridine-5'-triphosphate)

Formula (free acid)..... $C_9H_{15}N_2O_{15}P_3$
 Formula weight.....484
 $A_{250} / A_{260} = 0.74$ $A_{280} / A_{260} = 0.36$

2'-Fluorine-dCTP

Formula (Li salt)..... $C_9H_{11}N_3O_{13}FP_3Li_4$
 Formula weight.....509
 Purity.....>90%

2'-Fluorine-dUTP

Formula (Li salt)..... $C_9H_{10}N_2O_{14}FP_3Li_4$
 Formula weight.....510
 Purity.....>90%

Biotin-16-UTP

Formula (Li salt)..... $C_{32}H_{52}N_7O_{19}P_3S$
 Formula weight.....963.5
 Extinction coefficient.....7,100 / M cm (292 nm)
 Purity by HPLC.....>97%
 Purity by ^{31}P NMR.....>99%

4. Products

Cat. #	Concentration	Quantity
ATP Solution RA02825	100 mM	25 μ mol
NTP Solutions RN02825	100 mM (25 μ mol/tube) of ATP, CTP, GTP, and UTP Solutions	1 tube each of
2'-Fluorine-dCTP R2F110C	50 mM	1 μ mol
2'-Fluorine-dUTP R2F110U	50 mM	1 μ mol
Biotin-16-UTP BU6105H	50 mM	500 nmol

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