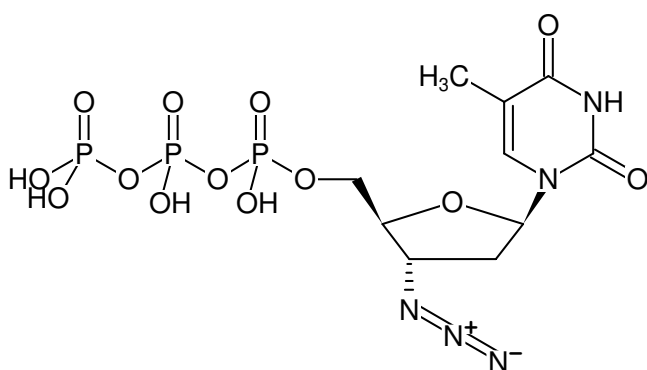


**AzTTP**

Zidovudine triphosphate

3'-Azido-2',3'-dideoxythymidine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-989S	10 µl (100 mM)
NU-989L	5 x 10 µl (100 mM)



Structural formula of AzTTP

For general laboratory use.**Shipping:** shipped on gel packs**Storage Conditions:** store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery**Molecular Formula:** C₁₀H₁₆N₅O₁₃P₃ (free acid)**Molecular Weight:** 507.18 g/mol (free acid)**Exact Mass:** 507.00 g/mol (free acid)**CAS#:** 906479-25-2**Purity:** ≥ 95 % (HPLC)**Form:** solution in water**Color:** colorless to slightly yellow**Concentration:** 100 mM - 110 mM**pH:** 7.5 ± 0.5**Spectroscopic Properties:** λ_{max} 267 nm, ε 10.9 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)**Applications:**Suppression of HIV-type 1 replication^[1]Removal of iron from transferrin^[2]Inhibition of telomerase activity^[3]Inhibition of thymidine phosphorylation^[4]**Specific Ligands:**High binding affinity to HIV-1 mutants^[5]**Selected References:**

[1] Sayed *et al.* (2009) AZT 5'-triphosphate nanoformulation suppresses human immunodeficiency virus type 1 replication in peripheral blood mononuclear cells. *J. Neurobiology* **15** (4):343.

[2] D'Andrea *et al.* (2008) AZT: an old drug with new perspectives. *Curr. Clin. Pharmacol.* **3** (1):20.

[3] Liu *et al.* (2007) 3'-Azido-2',3'-dideoxynucleoside 5'-triphosphates inhibit telomerase activity in vitro, and the corresponding nucleosides cause telomere shortening in human HL60 cells. *Nucleic Acid Res.* **35** (21):7140.

[4] Lynx *et al.* (2006) 3'-Azido-3'-deoxythymidine (AZT) inhibits thymidine phosphorylation in isolated rat liver mitochondria: A possible mechanism of AZT hepatotoxicity. *Biochem. Pharmacol.* **71** (9):1342.

[5] Jamburuthugoda *et al.* (2005) Kinetic evidence for interaction of HIV type 1 reverse transcriptase with the 3'-OH of the incoming dTTP substrate. *Biochemistry* **44** (31):10635.

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**AzTTP**

Zidovudine triphosphate

3'-Azido-2',3'-dideoxythymidine-5'-triphosphate, Sodium salt

Elimadi *et al.* (1997) Differential effects of zidovudine and zidovudine triphosphate on mitochondrial permeability transition and oxidative phosphorylation. *Br. J. Pharmacol.* **121**:1295.

Jaju *et al.* (1995) Human immunodeficiency virus type 1 reverse transcriptase. 3'-Azidodeoxythymidine 5'-triphosphate inhibition indicates two-step binding for template-primer. *J. Biol. Chem.* **270**:9740.

Tornevik *et al.* (1995) Cytotoxicity of 3'-azido-3'-deoxythymidine correlates with 3'-azidothymidine-5'-monophosphate (AZTMP) levels, whereas anti-human immunodeficiency virus (HIV) activity correlates with 3'-azidothymidine-5'-triphosphate (AZTTP) levels in cultured CEM T-lymphoblastoid cells. *Biochem. Pharmacol.* **49**:829.