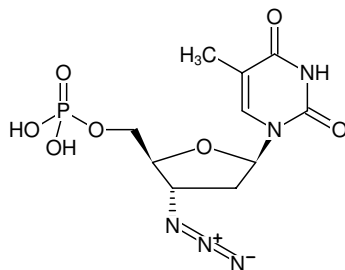


**AzTMP**

Zidovudine monophosphate, Sodium Salt

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

Cat. No.	Amount
NU-1601S	20 µl (10 mM)
NU-1601L	5 x 20 µl (10 mM)



Structural formula of AzTMP

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:** C₁₀H₁₄N₅O₇P (free acid)**Molecular Weight:** 347.22 g/mol (free acid)**Exact Mass:** 347.06 g/mol (free acid)**CAS#:** 29706-85-2**Purity:** ≥ 95 % (HPLC)**Form:** solution in water**Color:** colorless to slightly yellow**Concentration:** 10 mM - 11 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)**Selected References:**

Coulier *et al.* (2008) Simultaneous determination of endogenous deoxynucleotides and phosphorylated nucleoside reverse transcriptase inhibitors in peripheral blood mononuclear cells using ion-pair liquid chromatography coupled to mass spectrometry. *Proteomics Clin. Appl.* **2**:1557.

Cruchaga *et al.* (2005) Inhibition of Phosphorolysis Catalyzed by HIV-1 Reverse Transcriptase Is Responsible for the Synergy Found in Combinations of 3'-Azido-3'-deoxythymidine with Nonnucleoside Inhibitors *Biochemistry* **44** (9):3535.

Sarañanos *et al.* (2002) Structures of HIV-1 reverse transcriptase with pre- and post-translocation AZTMP-terminated DNA. *EMBO J.* **21**:6614.

Chenal-Francisque *et al.* (1999) The highly similar TMP kinases of *Yersinia pestis* and *Escherichia coli* differ markedly in their AZTMP phosphorylating activity. *Eur. J. Biochem.* **265**:112.

Rigourd *et al.* (2000) Inhibition of the initiation of HIV-1 reverse transcription by 3'-azido-3'-deoxythymidine. Comparison with elongation. *J. Biol. Chem.* **275**:26944.

Brundiers *et al.* (1999) Modifying human thymidylate kinase to potentiate azidothymidine activation. *J. Biol. Chem.* **274**:35289.

Canard *et al.* (1998) Enhanced binding of azidothymidine-resistant human immunodeficiency virus 1 reverse transcriptase to the 3'-azido-3'-deoxythymidine 5'-monophosphate-terminated primer. *J. Biol. Chem.* **273**:14596.

Yan *et al.* (1995) 3'-Azidothymidine (zidovudine) inhibits glycosylation and dramatically alters glycosphingolipid synthesis in whole cells at clinically relevant concentrations. *J. Biol. Chem.* **270**:22836.

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.

Reardon *et al.* (1994) Reduction of 3'-azido-3'-deoxythymidine (AZT) and AZT nucleotides by thiols. Kinetics and product identification. *J. Biol. Chem.* **269**:15999.

Hall *et al.* (1994) 3'-Azido-3'-deoxythymidine potently inhibits protein glycosylation. A novel mechanism for AZT cytotoxicity. *J. Biol. Chem.* **269**:14355.