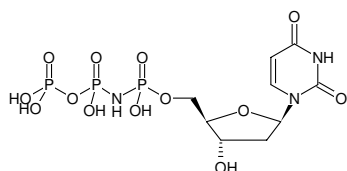


**dUpNHpp**

(dUMPNPP)

2'-Deoxyuridine-5'-[( $\alpha,\beta$ )-imido]triphosphate, Sodium salt

Cat. No.	Amount
NU-903S	50 $\mu$ l (10 mM)
NU-903L	5 x 50 $\mu$ l (10 mM)



Structural formula of dUpNHpp

**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:** C<sub>9</sub>H<sub>16</sub>N<sub>3</sub>O<sub>13</sub>P<sub>3</sub> (free acid)**Molecular Weight:** 467.15 g/mol (free acid)**Exact Mass:** 466.99 g/mol (free acid)**CAS#:** 170428-86-1**Purity:**  $\geq$  95 % (HPLC)**Form:** solution in water**Color:** colorless to slightly yellow**Concentration:** 10 mM - 11 mM**pH:** 7.5  $\pm$  0.5**Spectroscopic Properties:**  $\lambda_{\max}$  262 nm,  $\epsilon$  10.2 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)**Applications:**X-ray analysis of vaccinia virus dUTPase<sup>[1]</sup>X-ray analysis of DNA-polymerase  $\beta$ <sup>[2]</sup>Kinetic of dUTPase<sup>[3]</sup>Inhibition of dUTPase<sup>[4]</sup>**Specific Ligands:**Vaccine virus dUTPase<sup>[1]</sup>DNA-polymerase  $\beta$ <sup>[2]</sup>**Selected References:**[1] Samal *et al.* (2007) Structures of vaccinia virus dUTPase and its nucleotide complexes. *Acta crystallographica Section D* **D63**:571.[2] Batra *et al.* (2006) Magnesium-induced assembly of a complex DNA polymerase catalytic complex. *Structure* **14**:757.[3] Tóth *et al.* (2007) Kinetic Mechanism of Human dUTPase, an Essential Nucleotide Pyrophosphatase Enzyme. *The journal of biological chemistry* **282** (46):33572.[4] Persson *et al.* (1996) Synthesis of 2'-deoxyuridine 5'-( $\alpha,\beta$ -imido)triphosphate: A substrate analogue and potent inhibitor of dUTPase. *Bioorgan. Med. Chem.* **4** (4):553.Xia *et al.* (2011) Structural insights into complete metal ion coordination from ternary complexes of B family RB69 DNA polymerase. *Biochemistry*. **50** (42): 9114.Badalucco *et al.* (2011) Crystallization of Chlorella deoxyuridine triphosphatase. *Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun.* **67** (Pt 12): 1599.Pecsi *et al.* (2010) Aromatic stacking between nucleobase and enzyme promotes phosphate ester hydrolysis in dUTPase. *Nucleic Acids Res.* **38** (20):7179.Siggaard *et al.* (2009) Concerted bifunctionality of the dCTP deaminase-dUTPase from *Methanocaldococcus jannaschii*: A structural and pre-steady state kinetic analysis. *Archives of Biochemistry and Biophysics* **490** (1):42.Varga *et al.* (2008) Active site of mycobacterial dUTPase: Structural characteristics and a built-in sensor. *Biochemical and Biophysical Research Communications* **373**:8.Vertessy *et al.* (2007) Flexible segments modulate co-folding of dUTPase and nucleocapsid proteins. *Nucleic Acids Research* **35** (2):495.