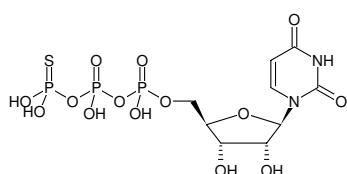


**UTPyS**

Uridine-5'-(γ-thio)-triphosphate, Sodium salt

Cat. No.	Amount
NU-416-1	1 mg
NU-416-5	5 mg



Structural formula of UTPyS

For research use only!**Shipping:** shipped on blue ice**Storage Conditions:** store at -20 °C

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

Shelf Life: 6 months after date of delivery**Molecular Formula:** C₉H₁₅N₂O₁₄P₃S (free acid)**Molecular Weight:** 500.20 g/mol (free acid)**Exact Mass:** 499.95 g/mol (free acid)**CAS#:** 79049-97-1**Purity:** ≥ 85 % (HPLC), contains approx. 10 % UDP, which UTPyS decomposes to at room temperature**Form:** solid**Spectroscopic Properties:** λ_{max} 262 nm, ε 10.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)**Specific Ligands:**Ligand for purinergic receptors:Enzymatic stable and potent agonist at P2Y₂/P2Y₄^[1,2,3,4] and P2Y₆^[5] receptors

Please note: For reasons of stability, please make sure that the pH value of a solution of this product never drops below 7.0. This can be achieved by dissolving the nucleotide in a buffer of your choice (50 - 100 mM, pH 7 - 10). Dissolve and adjust concentration photometrically.

Selected References:

- [1] Higgins *et al.* (2014) Nucleotides Regulate Secretion of the Inflammatory Chemokine CCL2 from Human Macrophages and Monocytes. *Mediators Inflamm.* 293925.
- [2] Zizzo M. *et al.* (2012) Pharmacological characterization of uracil nucleotide-preferring P2Y receptors modulating intestinal motility: a study on mouse ileum. *Purinergic Signal.* **8** (2):275.
- [3] De Proost *et al.* (2009) Purinergic signaling in the pulmonary neuroepithelial body microenvironment unraveled by live cell imaging. *The FASEB Journal* **23** (4):1153.
- [4] Chopra *et al.* (2008) Expression and function of rat urothelial P2Y receptors. *Am J Physiol Renal Physiol* **294**:F821.
- [5] Malmsjö *et al.* (2003) The stable pyrimidines UDPβS and UTPyS discriminate between contractile cerebrovascular P2 receptors. *Eur. J. Pharmacol.* **458** (3):305.
- Seifert *et al.* (2012) Inhibitors of membranous adenylyl cyclases. *Trends Pharmacol. Sci.* **33** (2):64.
- Sugihara M. *et al.* (2011) Dual signaling pathways of arterial constriction by extracellular uridine 5'-triphosphate in the rat. *J. Pharmacol. Sci.* **115** (3):293.
- Stroupe *et al.* (2009) Minimal membrane docking requirements revealed by reconstitution of Rab GTPase-dependent membrane fusion from purified components. *PNAS* **106** (42):17626.
- Read *et al.* (2005) UTP-dependent turnover of *Trypanosoma brucei* mitochondrial mRNA requires UTP polymerization and involves the RET1 TUTase. *RNA* **11**:763.