

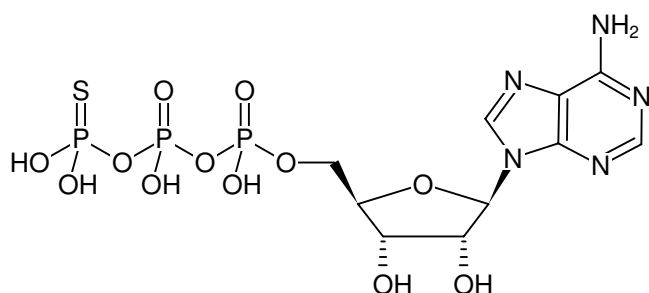
**ATPyS**

Ado-5'-PPP[S]

Adenosine-5'-(γ-thio)-triphosphate, Tetralithium salt

Adenosine-5'-(3-thio)-triphosphate, Adenosine-5'-(3-thiotriphosphate)

Cat. No.	Amount
NU-406-5	5 mg
NU-406-25	25 mg
NU-406-50	50 mg



Structural formula of ATPyS

**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:** C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>12</sub>P<sub>3</sub>S (free acid)**Molecular Weight:** 523.24 g/mol (free acid)**Exact Mass:** 522.97 g/mol (free acid)**CAS#:** 93839-89-5**Purity:** ≥ 90 % (HPLC), contains < 10 % ADP**Form:** solid**Spectroscopic Properties:** λ<sub>max</sub> 259 nm, ε 15.4 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)**Applications:**Modulation of intracellular signalling<sup>[1,2]</sup>Signalling of purinergic receptors<sup>[3]</sup>Regulation of cation channels<sup>[4]</sup>Modulation of cytokine secretion<sup>[5]</sup>Substrate for kinases<sup>[6]</sup>5' end labeling with T4 Polynucleotide Kinase (T4 PNK) of DNA<sup>[9]</sup> and RNA<sup>[9,10]</sup>Agonistic ligand, mainly for nucleoside receptor A<sub>1</sub>  
Nucleosidephosphates stabilized against hydrolytic degradation can directly bind to nucleoside receptors.**Specific Ligands:**Purinoreceptors<sup>[7]</sup>Proteasomes<sup>[8]</sup>Agonist for P2Y<sub>2</sub><sup>[11]</sup> and 12 receptors<sup>[1,15]</sup> and for P2X(2) purinoreceptor<sup>[3,12,13,14]</sup>**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] Buzzi *et al.* (2009) Extracellular ATP activates MAP kinase cascades through a P2Y purinergic receptor in the human intestinal Caco-2 cell line. *Biochim. Biophys. Acta* **1790**:1651.[2] Wu *et al.* (2008) Extracellular ATP-induced NO production and its dependence on membrane Ca<sup>2+</sup> flux in *Salvia miltiorrhiza* hairy roots. *J. Experim. Botany* **59**:4007.[3] Hansen *et al.* (2008) Purinergic receptors and calcium signalling in human pancreatic duct cell lines. *Cell. Phys. Biochem.* **22**:157.[4] Ashrafpour *et al.* (2008) ATP regulation of a large conductance voltage-gated cation channel in rough endoplasmic reticulum of rat hepatocytes. *Arch. Biochem. Biophys.* **471**:50.[5] Nalos *et al.* (2008) Host tissue damage signal ATP impairs IL-12 and IFNγ secretion in LPS stimulated whole human blood. *Intensive care medicine* **34**:1891.[6] Carlson *et al.* (2010) Use of a semisynthetic epitope to probe histidine

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