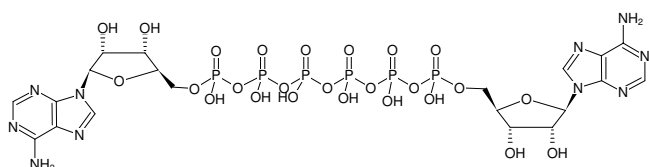


**AP<sub>6</sub>A**P<sup>1</sup>-(5'-Adenosyl) P<sup>6</sup>-(5'-adenosyl) hexaphosphate, Sodium salt

Cat. No.	Amount
NU-509S	20 µl (10 mM)
NU-509L	5 x 20 µl (10 mM)

Structural formula of AP<sub>6</sub>A**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:** 12 months after date of delivery**Molecular Formula:** C<sub>20</sub>H<sub>30</sub>N<sub>10</sub>O<sub>25</sub>P<sub>6</sub> (free acid)**Molecular Weight:** 996.35 g/mol (free acid)**Exact Mass:** 995.98 g/mol (free acid)**CAS#:** 56983-23-4**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<sub>max</sub> 259 nm, ε 27.0 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)**Applications:**Kinetic parameters with arabisopsis thaliana Nudix hydrolase<sup>[1]</sup>Action as neurotransmitter<sup>[2]</sup>Modeling of binding to Nudix hydrolase Ndx1<sup>[3]</sup>Mediated release of atrial atriopeptin (ANP)<sup>[4]</sup>**Specific Ligands:**Binding properties to Nudix hydrolase<sup>[5]</sup>**Selected References:**

- [1] Olejnik *et al.* (2007) Cloning and characterization of AtNUDT13, a novel mitochondrial Arabidopsis thaliana Nudix hydrolase specific for long-chain diadenosine polyphosphates. *FEBS J.* **274** (18):4877.
- [2] Delicado *et al.* (2006) Dinucleoside polyphosphates and their interaction with other nucleotide signaling pathways. *Pflugers Arch.* **452** (5):563.
- [3] Zheng *et al.* (2005) Homology modeling and substrate binding study of Nudix hydrolase Ndx1 from *Thermos thermophilus* HB8. *Biochem. Biophys. Res. Commun.* **333** (3):881.
- [4] Yuan *et al.* (2007) Diadenosine tetraphosphate stimulates atrial ANP release via A (1) receptor: involvement of K (ATP) channel and PKC. *Peptides* **28** (7):1397.
- [5] Garza *et al.* (2009) Kinetic, dynamic, ligand binding properties, and structural models of a dual-substrate specific nudix hydrolase from *Schizosaccharomyces pombe*. *Biochemistry* **48** (26):6224.
- Gross *et al.* (2006) Nucleotide-binding domains of Cystic Fibrosis Transmembrane Conductance Regulator, an ABC Transporter, Catalyze Adenylate Kinase Activity but not ATP Hydrolysis. *J. Biol. Chem.* **281** (7):4058.
- Luo *et al.* (1999) Identification of diadenosine hexaphosphate in human erythrocytes. *Hypertension* **34**:872.
- Van der Giet *et al.* (1999) Evidence for two different P2X-receptors mediating vasoconstriction of Ap5A and Ap6A in the isolated perfused rat kidney. *Br. J. Pharmacol.* **127**:1463.
- Fontes *et al.* (1999) Acyl-CoA synthetase catalyzes the synthesis of diadenosine hexaphosphate (Ap6A). *Biochimie* **81**:229.
- Schluter *et al.* (1994) Diadenosine phosphates and the physiological control of blood pressure. *Nature* **367**:186.
- Morii *et al.* (1992) Adenosine (5')hexaphospho (5')adenosine stimulation of a Ca (2+)-induced Ca (2+)-release channel from skeletal muscle sarcoplasmic reticulum. *Eur. J. Biochem.* **205**:979.