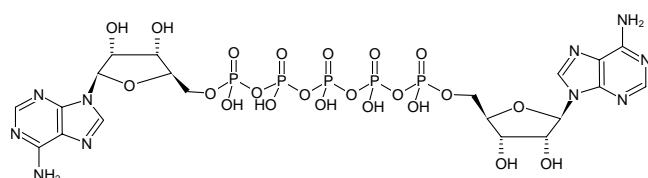


**AP₅A**P¹-(5'-Adenosyl) P⁵-(5'-adenosyl) pentaphosphate, Sodium salt

Cat. No.	Amount
NU-508S	50 µl (10 mM)
NU-508L	5 x 50 µl (10 mM)

Structural formula of AP₅A**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:** C₂₀H₂₉N₁₀O₂₂P₅ (free acid)**Molecular Weight:** 916.37 g/mol (free acid)**CAS#:** 41708-91-2**Purity:** ≥ 95 % (HPLC)**Form:** clear aqueous solution, pH 7.5 ± 0.5**Concentration:** 10 mM - 11 mM**pH:** 7.5 ± 0.5**Spectroscopic Properties:** λ_{max} 259 nm; ε 27.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)**Specific Ligands:**Ligand for P2Y and P2X receptors:Agonist at P2Y₁ receptor^[1,2,3], at P2X₁ receptor^[4,5], P2X₁ - P2X₆, P2Y_{1,2,4,12} receptors^[2,4,5] and vascular purinoreceptor P2X^[6]**Selected References:**[1] Gualix *et al.* (2014) Presence of diadenosine polyphosphates in microdialysis samples from rat cerebellum in vivo: effect of mild hyperammonemia on their receptors. *Purinergic Signal*. **10** (2):349.[2] Szczepanska-Konkel *et al.* (2005) Effects of diadenosine polyphosphates on glomerular volume. *Br. J. Pharmacol.* **144** (8):1109.[3] Yerxa *et al.* (2001) P1- (uridine 5')-P4- (2'-deoxycytidine 5')tetraphosphate tetrasodiumsalt a next generation P2Y2 receptor agonist for treatment of cystic fibrosis. *J. Pharmacol. Exp. Ther.* **302**:871.[4] Zhang *et al.* (2002) Identification and characterization of a novel Gai-coupled ADP receptor from human and mouse. *J. Pharmacol. Exp. Ther.* **301** (2):705.[5] Allsopp *et al.* (2013) P2X receptor chimeras highlight roles of amino terminus to partial agonist efficacy, the carboxyl terminus to recovery from desensitization, and independent regulation of channel transitions. *J. Biol. Chem.* **288** (29):21412.[6] Neely *et al.* (1996) P2X purinoreceptors in the feline pulmonary vascular bed: distribution and selective in vivo pharmacological probes. *Am. J. Physiol.* **270** (6 Pt 1):L889.Pintor *et al.* (1999) Presence of dinucleotide and ATP receptors in human cerebrocortical synaptic terminals. *Eur. J. Pharmacol.* **366**:159.Wildman *et al.* (1999) Selectivity of diadenosine polyphosphates for rat P2X receptor subunits. *Eur. J. Pharmacol.* **367**:119.Jovanovic *et al.* (1998) Diadenosine 5',5''-P₁P₅-pentaphosphate harbors the properties of a signaling molecule in the heart. *FEBS Lett.* **423**:314.Verspohl *et al.* (1998) Diadenosine polyphosphates in insulin-secreting cells: interaction with specific receptors and degradation. *Diabetes* **47**:1727.Delaney *et al.* (1997) Diadenosine polyphosphates inhibit adenosine kinase activity but decrease levels of endogenous adenosine in rat brain. *Eur. J. Pharmacol.* **332**:35.Edgecombe *et al.* (1997) Diadenosine polyphosphate-stimulated gluconeogenesis in isolated rat proximal tubules. *Biochem. J.* **323**:451.Ogilvie *et al.* (1996) Adenine dinucleotides: a novel class of signalling molecules. *J. Auton. Pharmacol.* **16**:325.Schluter *et al.* (1994) Diadenosine phosphates and the physiological control of blood pressure. *Nature* **367**:186.