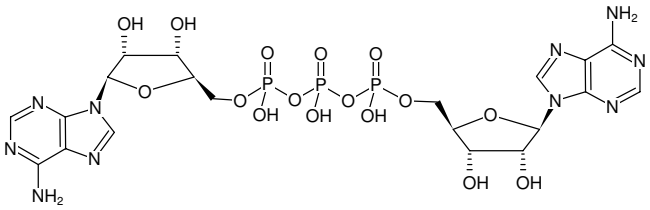
DATA SHEET

Jena Bioscience

AP_3A - Solution

P^1-(5'-Adenosyl) P^3-(5'-adenosyl) triphosphate, Sodium salt

Cat. No.	Amount
NU-506S	50 µl (10 mM)
NU-506L	5 x 50 µl (10 mM)



Structural formula of AP_3A - Solution

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: $C_{20}H_{27}N_{10}O_{16}P_3$ (free acid)

Molecular Weight: 756.41 g/mol (free acid)

Exact Mass: 756.08 g/mol (free acid)

CAS#: 5959-90-0

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_{max} 259 nm, ε 27.0 L $mmol^{-1}$ cm^{-1} (Tris-HCl pH 7.5)

Specific Ligands:

Ligand for P2X and P2Y receptors:

Agonist at $P2Y_1$ receptor[1,2,3], at $P2Y_{12}$ and $P2Y_{13}$ receptors[4] and for $P2X_1$ - $P2X_4$ purinoreceptors[5]

Selected References:

[1] Szczepanska-Konkel *et al.* (2005) Effects of diadenosine polyphosphates on glomerular volume. *Br. J. Pharmacol.* **144 (8)**:1109.

[2] 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.

[3] Ralevic *et al.* (2001) Structure-activity relationships of diadenosine polyphosphates (ApnAs), adenosine polyphospho guanosines (ApnGs) and guanosine polyphospho guanosines (GpnGs) at P2 receptors in the rat mesenteric arterial bed. *Br. J. Pharmacol.* **134 (5)**:1073.

[4] Zhang *et al.* (2002) Identification and characterization of a novel Gαi-coupled ADP receptor from human and mouse. *J. Pharmacol. Exp. Ther.* **301 (2)**:705.

[5] 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.

Guranowski *et al.* (2000) Selective degradation of 2'-adenylated diadenosine tri- and tetraphosphates, Ap (3)A and Ap (4)A, by two specific human dinucleoside polyphosphate hydrolases. *Arch. Biochem. Biophys.* **373**:218.

Luo *et al.* (1999) Identification and characterization of diadenosine 5',5'-P1,P2 -diphosphate and diadenosine 5',5'-P1,P3-triphosphate in human myocardial tissue. *FASEB J.* **13**:695.

Luthje *et al.* (1988) Catabolism of Ap4A and Ap3A in whole blood. The dinucleotides are long-lived signal molecules in the blood ending up as intracellular ATP in the erythrocytes. *Eur. J. Biochem.* **173**:241.

Luthje *et al.* (1987) Catabolism of Ap4A and Ap3A in human serum. Identification of isoenzymes and their partial characterization. *Eur. J. Biochem.* **169**:385.

Luthje *et al.* (1985) Catabolism of Ap3A and Ap4A in human plasma. Purification and characterization of a glycoprotein complex with 5'-nucleotide phosphodiesterase activity. *Eur. J. Biochem.* **149**:119.

Bochner *et al.* (1984) AppppA and related adenylylated nucleotides are synthesized as a consequence of oxidation stress. *Cell* **37 (1)**:225.