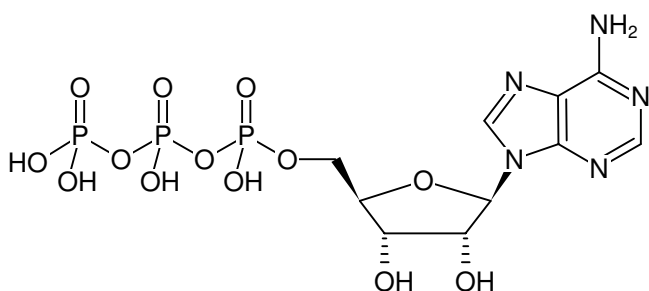


**ATP - Solid**

Adenosine 5'-triphosphate, Disodium salt trihydrate

Cat. No.	Amount
NU-1010-1G	1 g
NU-1010-10G	10 g
NU-1010-100G	100 g



Structural formula of ATP - Solid

**For research use only!****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<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>13</sub>P<sub>3</sub> (free acid)**Molecular Weight:** 507.18 g/mol (free acid)**Exact Mass:** 507.00 g/mol (free acid)**CAS#:** 51963-61-2**Purity:** ≥ 98 % (HPLC)**Form:** lyophilised**Spectroscopic Properties:** λ<sub>max</sub> 259 nm, ε 15.1 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.0)**Applications:**ATP-sensitive calcium channels<sup>[1]</sup>V-ATPases (cellular proton pumps)<sup>[2]</sup>ATP-coupled chromatin remodelling<sup>[3]</sup>ATP-binding cassette transporters<sup>[4]</sup>ATP-grasp enzymes<sup>[5]</sup>

Agonistic ligand, mainly for nucleoside receptor A<sub>1</sub>  
 Nucleoside-triphosphates can be converted by different membrane-bound phosphatases into nucleosides acting as nucleoside receptor ligands.

**Specific Ligands:**

Ligand for purinergic receptors:

P2X<sub>1</sub>-P2X<sub>3</sub><sup>[6,7]</sup>P2X<sub>1/4</sub><sup>[8]</sup>P2X<sub>4</sub><sup>[7]</sup>P2X<sub>7</sub><sup>[9,10,11]</sup>P2X<sub>1</sub> - P2X<sub>7</sub><sup>[12]</sup>P2Y<sub>1</sub><sup>[10,14]</sup>P2Y<sub>2</sub><sup>[13,14]</sup>P2Y<sub>11</sub><sup>[14]</sup>

**Quality Control Specifications:** in vitro transcription (T7 RNA polymerase): visible RNA fragments after 5 min incubation, DNases, RNases, Nicking Activity: not detectable, Proteases: not detectable

**Selected References:**

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[4] Gatti *et al.* (2011) Novel insights into targeting ATP-binding cassette transporters for antitumor therapy. *Curr. Med. Chem.* **18** (27):4237.

[5] Fawaz *et al.* (2011) The ATP-grasp enzymes. *Bioorg. Chem.* **39** (5):185.

[6] Lambertucci *et al.* (2015) Medicinal chemistry of P2X receptors: Agonists and orthosteric antagonists. *Curr. Med. Chem.* **22** (7):915.

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- [14] Kim *et al.* (2002) Methanocarba modification of uracil and adenine nucleotides: High potency of northern ring conformation at P2Y1, P2Y2, P2Y4 and P2Y11 but not P2Y6 receptors. *J. Med. Chem.* **45**:208.
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