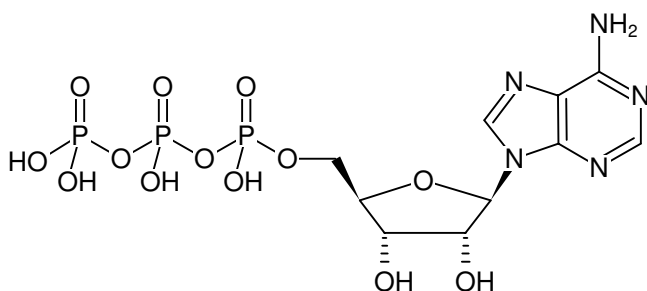




## ATP - Solution

Adenosine-5'-triphosphate, Sodium salt

Cat. No.	Amount
ATP_1ML	1 ml (100 mM)
ATP_10ML	10 ml (100 mM)
ATP_100ML	100 ml (100 mM)
ATP_200ML	200 ml (100 mM)



Structural formula of ATP - Solution

### For *in vitro* use only!

**Shipping:** shipped on blue ice

**Storage Conditions:** store at -20 °C

**Additional Storage Conditions:** Short term exposure (up to 1 week cumulative) to ambient temperature possible.

**Shelf Life:** 12 months

**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)

**CAS#:** 987-65-5

**Purity:** ≥ 99.0 % (HPLC)

**Form:** clear aqueous solution

**Concentration:** 100 mM ± 2 %

**pH:** 8.0 ± 0.2 (22 °C)

**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

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

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[8] Harhun *et al.* (2014) ATP-evoked sustained vasoconstrictions mediated by heteromeric P2X<sub>1/4</sub> receptors in cerebral arteries. *Stroke* **45** (8):2444.



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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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