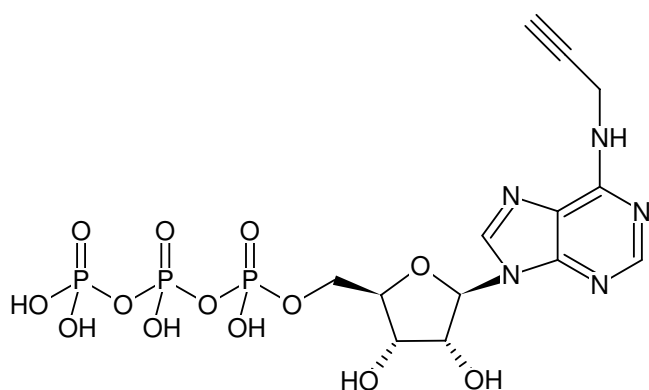




## N<sup>6</sup>-Propargyl-ATP (N<sup>6</sup>pATP)

N<sup>6</sup>-Propargyl-adenosine-5'-triphosphate, Sodium salt

Cat. No.	Amount
CLK-NU-001-1	1 mg
CLK-NU-001-5	5 mg



Structural formula of N<sup>6</sup>-Propargyl-ATP (N<sup>6</sup>pATP)

### 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>13</sub>H<sub>18</sub>N<sub>5</sub>O<sub>13</sub>P<sub>3</sub> (free acid)

**Molecular Weight:** 545.23 g/mol (free acid)

**Exact Mass:** 545.01 g/mol (free acid)

**Purity:** ≥ 95 % (HPLC)

**Form:** solid

**Color:** white to off-white

**Solubility:** 10 mM Tris-HCl pH 7.5

**Spectroscopic Properties:** λ<sub>max</sub> 262 nm, ε 18.0 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

### Applications:

*in vitro* AMPylation of proteins<sup>[1,2]</sup>

*in vitro* polyadenylation of RNA<sup>[3]</sup>

The resulting alkyne-functionalized protein<sup>[1,2]</sup> or RNA<sup>[3]</sup> can subsequently be processed via Cu(I)-catalyzed (azide-alkyne) click chemistry that offers the choice

- to introduce a Biotin group for subsequent purification tasks (via Azides of Biotin)
- to introduce fluorescent group for subsequent microscopic imaging (via Azides of fluorescent dyes)
- to crosslink the RNA to azide-functionalized biomolecules e.g. proteins

Presolski *et al.*<sup>[4]</sup> and Hong *et al.*<sup>[5]</sup> provide a general protocol for Cu(I)-catalyzed click chemistry reactions that may be used as a starting point for the set up and optimization of individual assays.

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. In some cases nucleoside phosphates act also directly on nucleoside receptors.

**Please note:** This compound contains a phosphoramidate linkage which is hydrolyzed at pH <7.0.  
For preparation of a 10 mM solution use 100 mM buffer (for example: bicarbonate, borate, phosphate and Tris) to prevent degradation at acidic pH.

### Related Products:

Copper (II)-Sulphate (CuSO<sub>4</sub>), #CLK-MI004

Tris(3-hydroxypropyl)triazolylmethylamine (THPTA), #CLK-1010

Sodium Ascorbate (Na-Ascorbate), #CLK-MI005

### Selected References:

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[2] Broncel *et al.* (2012) A New Chemical Handle for Protein AMPylation at the Host-Pathogen Interface. *ChemBioChem* **13**:183.

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[4] Presolski *et al.* (2011) Copper-Catalyzed Azide-Alkyne Click Chemistry for Bioconjugation. *Current Protocols in Chemical Biology* **3**:153.

[5] Hong *et al.* (2011) Analysis and Optimization of Copper-Catalyzed Azide-Alkyne Cycloaddition for Bioconjugation. *Angew. Chem. Int. Ed.* **48**:9879.

Sirci *et al.* (2012) Ligand-, structure- and pharmacophore-based molecular fingerprints: a case study on adenosine A<sub>1</sub>, A<sub>2A</sub>, A<sub>2B</sub>, and A<sub>3</sub> receptor



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Van Galen *et al.* (1994) A binding site model and structure-activity relationships for rat A3 adenosine receptor. *Molecular Pharmacology* **45**:1101.