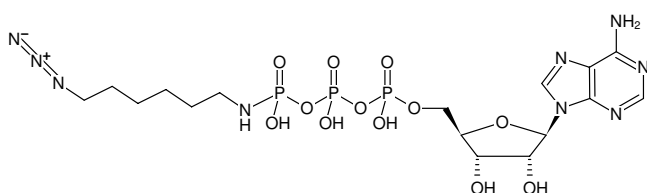




## $\gamma$ -[(6-Azidohexyl)-imido]-ATP

$\gamma$ -[(6-Azidohexyl)-imido]-adenosine-5'-triphosphate, Sodium salt

Cat. No.	Amount
CLK-T12-1	1 mg



Structural formula of  $\gamma$ -[(6-Azidohexyl)-imido]-ATP

### 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:** C<sub>16</sub>H<sub>28</sub>N<sub>9</sub>O<sub>12</sub>P<sub>3</sub> (free acid)

**Molecular Weight:** 631.37 g/mol (free acid)

**Exact Mass:** 631.11 g/mol (free acid)

**Purity:** ≥ 95 %

**Form:** solid

**Color:** white to off-white

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

**Spectroscopic Properties:**  $\lambda_{\max}$  259 nm,  $\epsilon$  15.3 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

### Applications:

*in vitro* phosphorylation of recombinant proteins<sup>[1]</sup>

### Description:

Lee *et al.*<sup>[1]</sup> reported a non-radioactive version of *in vitro* phosphorylation were  $\gamma$ -[(6-Azidohexyl)-imido]-ATP (compound 6<sup>[1]</sup>) has been successfully used instead of  $\gamma$ -<sup>32</sup>P-modified ATP to phosphorylate GST-tagged recombinant p27kip1 with protein kinase cdk2.

The phosphorylated, azide-modified protein substrate can subsequently be labeled with Alkynes or biotin or fluorescent dyes via Cu(I)-catalyzed Click-Chemistry or DBCO-containing biotin or fluorescent dyes via Cu(I)-free Click-Chemistry.

Presolski *et al.*<sup>[2]</sup> and Hong *et al.*<sup>[3]</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.

**Please note:** This compound contains a phosphoramidate linkage which is hydrolyzed at pH <7.

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:

$\gamma$ -[(Propargyl)-imido]-ATP, #CLK-T11, compound 1<sup>[1]</sup>

$\gamma$ -[2-Azidoethyl]-ATP, #NU-1701, compound 8<sup>[1]</sup>

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

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

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

### Selected References:

[1] Lee *et al.* (2009) Synthesis and reactivity of novel  $\gamma$ -phosphate modified ATP analogues. *Bioorg Med Chem Lett.* **19**:3804.

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

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