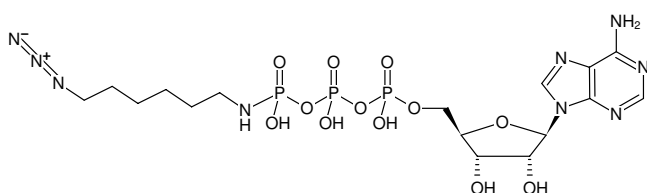




γ -[(6-Azidohexyl)-imido]-ATP

γ -[(6-Azidohexyl)-imido]-adenosine-5'-triphosphate, Sodium salt

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



Structural formula of γ -[(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: C₁₆H₂₈N₉O₁₂P₃ (free acid)

Molecular Weight: 631.37 g/mol (free acid)

Exact Mass: 631.11 g/mol (free acid)

Purity: ≥ 95 %

Form: white to off-white solid

Solubility: 10 mM Tris-HCl pH 7.5

Spectroscopic Properties: λ_{\max} 259 nm, ϵ 15.3 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Applications:

in vitro phosphorylation of recombinant proteins^[1]

Description:

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

The phosphorylated, azide-modified protein substrate can subsequently be labeled with Alkynes of 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.*^[2] and Hong *et al.*^[3] 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:

γ -[(Propargyl)-imido]-ATP, #CLK-T11, compound 1^[1]

γ -[2-Azidoethyl]-ATP, #NU-1701, compound 8^[1]

Copper (II)-Sulphate (CuSO₄), #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 γ -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.