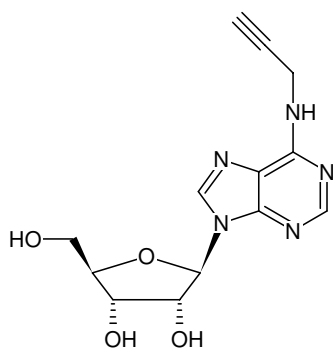




N⁶-Propargyl-adenosine

Cat. No.	Amount
CLK-N004-1	1 mg
CLK-N004-5	5 mg



Structural formula of N⁶-Propargyl-adenosine

For research use only!

Shipping: shipped at ambient temperature

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: C₁₃H₁₅N₅O₄

Molecular Weight: 305.29 g/mol

Exact Mass: 305.11 g/mol

Purity: ≥ 95 % (HPLC)

Form: solid

Color: white to off-white

Spectroscopic Properties: λ_{max} 262 nm, ε 18.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Applications:

mRNA poly(A) tail synthesis monitoring^[1]

Description:

N⁶-propargyl-adenosine (N⁶pA) can be used to measure *de novo* mRNA poly(A) tail synthesis in proliferating cells. N⁶pA is cell permeable and incorporates into nascent mRNA transcripts both transcriptionally by RNA polymerase I,II and III and posttranscriptionally by poly(A) polymerase instead of their natural analog adenosine.

The resulting ethynyl-functionalized RNA can subsequently be detected via Cu(I)-catalyzed click chemistry that offers the choice to introduce a Biotin group (via Azides of Biotin) for subsequent purification tasks or a fluorescent group (via Azides of fluorescent dyes) for subsequent microscopic imaging^[1].

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.

Related Products:

5-Ethynyl-uridine (5-EU), #CLK-N002

Copper (II)-Sulphate (CuSO₄), #CLK-MI004

Tris(3-hydroxypropyltriazolylmethyl)amine (THPTA), #CLK-1010

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

Selected References:

[1] Grammel *et al.* (2012) Chemical Reporters for Monitoring RNA Synthesis and Poly (A) Tail Dynamics. *Chem Bio Chem* **13**:1112.

[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.