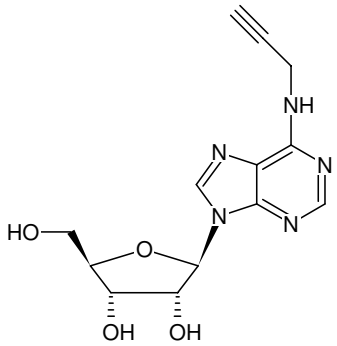
DATA SHEET

Jena Bioscience

N^6-Propargyl-adenosine

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



Structural formula of N^6-Propargyl-adenosine

For general laboratory use.

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: $C_{13}H_{15}N_5O_4$

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:
N^6-propargyl-adenosine (N^6pA) can be used to measure *de novo* mRNA poly(A) tail synthesis in proliferating cells. N^6pA 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 analolg 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 ($CuSO_4$), #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.