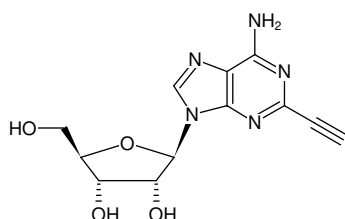




2-Ethynyl-adenosine

Cat. No.	Amount
CLK-N005-1	1 mg
CLK-N005-5	5 mg



Structural formula of 2-Ethynyl-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:** C₁₂H₁₃N₅O₄**Molecular Weight:** 291.26 g/mol**Exact Mass:** 291.10 g/mol**Purity:** ≥ 95 % (HPLC)**Form:** solid**Color:** white to off-white**Solubility:** up to 4.0 mM in 1 x PBS**Applications:**mRNA poly(A) tail synthesis monitoring^[1]**Description:**

2-Ethynyl-labeled adenosine (2-EA) can be used to measure *de novo* mRNA poly(A) tail synthesis in proliferating cells. 2-EA 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:

2-Ethynyl-ATP (2-EATP), #CLK-NU-004

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] Curanovic *et al.* (2013) Global profiling of stimulus-induced polyadenylation in cells using a poly (A) trap. *Nat. Chem. Biol.* **9** (11):671.

[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.