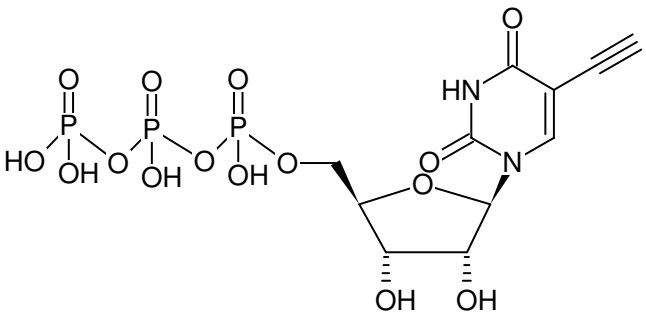
DATA SHEET

Jena Bioscience

5-Ethynyl-UTP (5-EUTP)

5-Ethynyl-uridine-5'-triphosphate, Sodium salt

Cat. No.	Amount
CLK-T08-S	5 µl (100 mM)
CLK-T08-L	5 x 5 µl (100 mM)
CLK-T08-XL	50 µl (100 mM)



Structural formula of 5-Ethynyl-UTP (5-EUTP)

For general laboratory use.

Shipping: shipped on gel packs

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: $C_{11}H_{15}N_2O_{15}P_3$ (free acid)

Molecular Weight: 508.16 g/mol (free acid)

Exact Mass: 507.97 g/mol (free acid)

Purity: ≥ 95 % (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 100 mM - 110 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{max} 288 nm, ε 12.0 L mmol^{-1} cm^{-1} (Tris-HCl pH 7.5)

Applications:
Incorporation into RNA by T7 RNA polymerase-mediated *in vitro* transcription.

The resulting alkyne-functionalized RNA can subsequently be processed via Cu(I)-catalyzed (azide-alkyne) click chemistry that offers the choice

- to introduce a Biotin group for subsequent purification tasks (via Azides of Biotin)
- to introduce fluorescent group for subsequent microscopic imaging (via Azides of fluorescent dyes)
- to crosslink the RNA to azide-functionalized biomolecules e.g.proteins

Presolski *et al.*[1] and Hong *et al.*[2] 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:
Copper (II)-Sulphate ($CuSO_4$), #CLK-MI004
Tris(3-hydroxypropyltriazolylmethyl)amine (THPTA), #CLK-1010
Sodium Ascorbate (Na-Ascorbate), #CLK-MI005

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

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