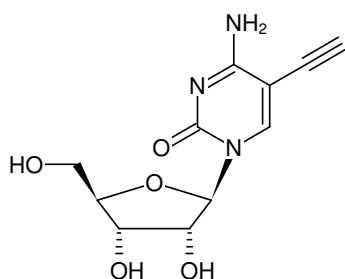


**5-Ethynyl-cytidine (5-EC)**

| Cat. No. | Amount |
|----------|--------|
| CLK-087 | 10 mg |



Structural formula of 5-Ethynyl-cytidine (5-EC)

For general laboratory use.**Shipping:** shipped at ambient temperature**Storage Conditions:** store at -20 °C**Additional Storage Conditions:** store dry and under inert gas

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery**Molecular Formula:** C₁₁H₁₃N₃O₅**Molecular Weight:** 267.24 g/mol**Exact Mass:** 267.09 g/mol**CAS#:** 65223-78-1**Purity:** ≥ 99 % (HPLC)**Form:** solid**Color:** white to off-white**Solubility:** DMSO**Spectroscopic Properties:** λ_{max} 294 nm, ε 8.5 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)**Applications:**RNA synthesis monitoring^[1]**Description:**

Ethynyl-labeled cytidine (5-EC) can be used as a replacement for BrU (5-Bromo-uridine) to measure *de novo* RNA synthesis in proliferating cells. 5-EC is cell permeable and incorporates into nascent RNA instead of its natural analog cytidine.

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.

Selected References:

[1] Qu *et al.* (2013) 5-Ethynylcytidine as a new agent for detecting RNA synthesis in live cells by click chemistry. *Anal. Biochem.* **434**:128.