

## 5-Ethynyluridine

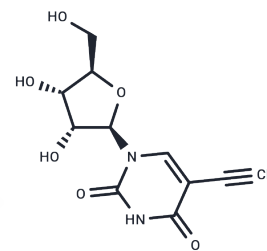
## Chemical Properties

CAS No. : 69075-42-9

Formula: C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O<sub>6</sub>

Molecular Weight: 268.22

Storage: Store at low temperature, Keep away from moisture,  
Keep away from direct sunlight  
Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
Actual storage temperature shall be subject to the COA.



## Biological Description

Description	5-Ethynyluridine can be used to label newly synthesized RNA. This approach, named capture of the newly transcribed RNA interactome using click chemistry (RICK), systematically captures proteins bound to a wide range of RNAs, including nascent RNAs and traditionally neglected nonpolyadenylated RNAs.
Targets(IC50)	Nucleoside Antimetabolite/Analog
In vivo	EU labelling can be used to examine transcription in vivo in mouse models of nervous system disorders. Injection of EU directly into the cerebellum results in reproducible labelling of newly transcribed RNA in cerebellar neurons and glia, with cell type-specific differences in relative labelling intensities, such as Purkinje cells exhibiting the highest levels. EU-labelling accumulating into cytoplasmic inclusions, indicating that EU, like other modified uridines, may introduce non-physiological properties in labelled RNAs [1].

## Solubility Information

Solubility	DMF: 10 mg/mL (37.28 mM), Sonication is recommended. PBS (pH 7.2): 5 mg/mL (18.64 mM), Sonication is recommended. DMSO: 55 mg/mL (205.06 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 1 mg/mL (3.73 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.7283 mL	18.6414 mL	37.2828 mL
5 mM	0.7457 mL	3.7283 mL	7.4566 mL
10 mM	0.3728 mL	1.8641 mL	3.7283 mL
50 mM	0.0746 mL	0.3728 mL	0.7457 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Van't Sant LJ, et al. In vivo 5-ethynyluridine (EU) labelling detects reduced transcription in Purkinje cell degeneration mouse mutants, but can itself induce neurodegeneration. *Acta Neuropathol Commun.* 2021 May 21; 9(1):94.

Bao X, et al. Capturing the interactome of newly transcribed RNA. *Nat Methods.* 2018 Mar;15(3):213-220.

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