

Product Name: 5-Ethynyl-2'-deoxyuridine

Catalog No.: 7207

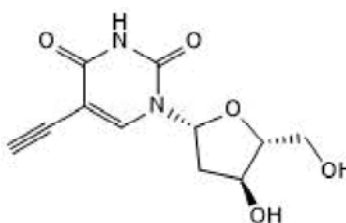
Batch No.: 1

CAS Number: 61135-33-9

IUPAC Name: 5-ethynyl-1-((2*R*,4*S*,5*R*)-4-hydroxy-5-(hydroxymethyl)tetrahydrofuran-2-yl)pyrimidine-2,4(1*H*,3*H*)-dione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₂N₂O₅
Batch Molecular Weight: 252.23
Physical Appearance: Off White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.38	4.8	11.11
Found	52.55	4.96	10.81

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

5-Ethynyl-2'-deoxyuridine is a thymidine analog for labeling DNA. Can be linked to an azide fluorophore through click chemistry and used to detect DNA synthesis in proliferating cells in vivo and in vitro. Detects very low levels of cell proliferation in tissues with low cellular turnover. 5-Ethynyl-2'-deoxyuridine suppresses cell proliferation in osteosarcoma and glioblastoma cell lines, induces a 'futile' DNA repair cycle and induces DNA strand breaks and apoptosis at a higher rate than Temozolomide (Cat. No. 2706).

Physical and Chemical Properties:

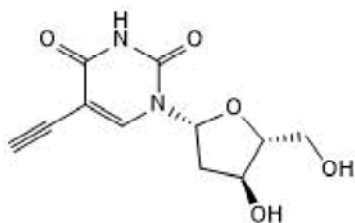
Batch Molecular Formula: C₁₁H₁₂N₂O₅

Batch Molecular Weight: 252.23

Physical Appearance: Off White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Wang et al (2022) Nucleotide excision repair removes thymidine analog 5-ethynyl-2'-deoxyuridine from the mammalian genome. *Proc.Natl.Acad.Sci.U.S.A.* **119** e2210176119. PMID: 35994676.

Salic & Mitchison (2008) A chemical method for fast and sensitive detection of DNA synthesis in vivo. *Proc.Natl.Acad.Sci.U.S.A.* **105** 2415. PMID: 18272492.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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