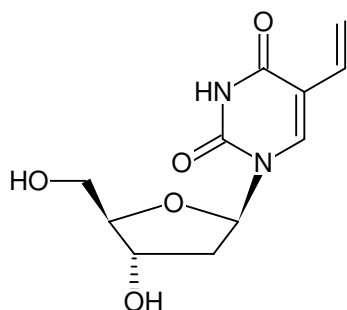




5-Vinyl-2'-deoxyuridine (5-VdU)

5-Ethenyl-2'-deoxyuridine
2'-Deoxy-5-vinyluridine
2'-Deoxy-5-ethenyluridine

Cat. No.	Amount
CLK-050-10	10 mg
CLK-050-50	50 mg



Structural formula of 5-Vinyl-2'-deoxyuridine (5-VdU)

For general laboratory use.

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: C₁₁H₁₄N₂O₅

Molecular Weight: 254.24 g/mol

Exact Mass: 254.09 g/mol

CAS#: 55520-67-7

Purity: ≥ 98 % (HPLC)

Form: solid

Color: white to off-white

Solubility: DMSO, methanol

Spectroscopic Properties: λ_{max} 292 nm, ε 9.2 L mmol⁻¹ cm⁻¹ (Methanol)

Applications:

DNA synthesis monitoring^[1]

Description:

5-VdU (5-Vinyl-2'-deoxyuridine) can be used as a replacement for BrdU (5-Bromo-2'-deoxyuridine) or the copper-catalyst requiring 5-EdU (5-Ethynyl-2'-deoxyuridine) to measure *de novo* DNA synthesis during the S-phase of the cell cycle.

5-VdU is cell permeable and incorporates into replicating DNA instead of its natural analog thymidine. The resulting vinyl-functionalized DNA can subsequently be detected via Cu(I)-free Alkene-Tetrazine Ligation that offers the choice to introduce a Biotin group (via Tetrazines of Biotin) for subsequent purification tasks or a fluorescent group (via Tetrazines of fluorescent dyes) for subsequent microscopic imaging^[1].

Related Products:

5-Ethynyl-2'-deoxy-uridine (5-EdU), #CLK-N001

5-Vinyl-uridine (5-VU), #CLK-049

Selected References:

[1] Rieder *et al.* (2014) Alkene-Tetrazine Ligation for Imaging Cellular DNA. *Angew. Chem. Int. Ed.* **53**:9168.