



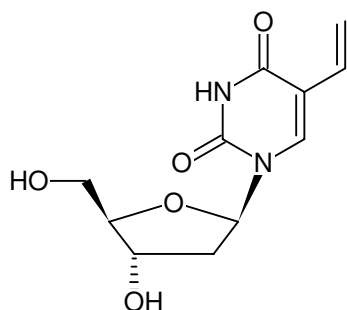
## 5-Vinyl-2'-deoxyuridine (5-VdU)

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 research use only!

**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:** C<sub>11</sub>H<sub>14</sub>N<sub>2</sub>O<sub>5</sub>

**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<sub>max</sub> 292 nm, ε 9.2 L mmol<sup>-1</sup> cm<sup>-1</sup> (Methanol)

### Applications:

DNA synthesis monitoring<sup>[1]</sup>

### 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<sup>[1]</sup>.

### 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.