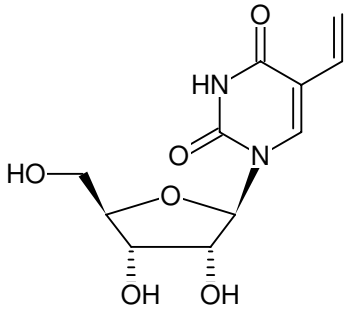
DATA SHEET

Jena Bioscience

5-Vinyl-uridine (5-VU)

5-Ethenyl-uridine

Cat. No.	Amount
CLK-049-10	10 mg
CLK-049-50	50 mg



Structural formula of 5-Vinyl-uridine (5-VU)

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: $C_{11}H_{14}N_2O_6$

Molecular Weight: 270.24 g/mol

Exact Mass: 270.09 g/mol

CAS#: 55520-64-4

Purity: ≥ 98 % (HPLC)

Form: solid

Color: white to off-white

Solubility: DMSO, methanol

Spectroscopic Properties: λ_{max} 288 nm, ε 8.5 L mmol^{-1} cm^{-1} (Methanol)

Applications:
RNA synthesis monitoring[1]

Description:
5-VU (5-Vinyl-uridine) can be used as a replacement for BrU (5-Bromo-uridine) or the copper-catalyst requiring 5-EU (5-Ethynyl-uridine) to measure *de novo* RNA synthesis in proliferating cells [1]. 5-VU is cell permeable and incorporates into nascent RNA instead of its natural analog uridine.

The resulting vinyl-functionalized RNA 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.

Related Products:
5-Ethynyl-uridine (5-EU), #CLK-N002

Selected References:
[1] Liu *et al.* (2019) A Nucleoside Derivative 5-Vinyluridine (VrU) for Imaging RNA in Cells and Animals. *Bioconjug. Chem.* **30 (11)**:2958.