

VU (5-Vinyl-uridine)

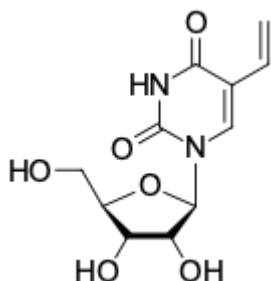
<http://www.lumiprobe.com/p/vinyl-uridine>

5-Vinyl-uridine (VU) is a uridine derivative with a terminal alkene group that can be used for monitoring and investigating RNA transcription in cells instead of [5-ethynyl-uridine \(EU\)](#).

VU is readily taken up by living cells and incorporated by RNA polymerases into *de novo* RNA instead of endogenous uridine, but not into DNA [1]. VU-labeled nascent cellular RNA can be detected quickly and with high sensitivity via inverse electron-demand Diels-Alder cycloaddition reaction (IEDDA) between the vinyl group and fluorescently or biotin-labeled [tetrazines](#).

Labeled RNA can be detected with different cell transcriptional levels estimation methods, e.g., fluorescent microscopy or flow cytometry.

[1] Liu H.S. et al. A Nucleoside Derivative 5-Vinyluridine (VrU) for Imaging RNA in Cells and Animals. *Bioconjug.Chem.* 2019. 30(11). 2958-2966.



Structure of VU (5-Vinyluridine)

General properties

Appearance: white solid

Molecular weight: 270.24

CAS number: 55520-64-4

Molecular formula: C₁₁H₁₄N₂O₆

Solubility: DMSO, methanol

Quality control: NMR ¹H and HPLC-MS (95+%)

Storage conditions: 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.