

## VU (5-Vinyl-uridine)

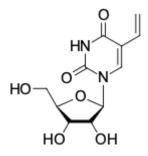
http://www.lumiprobe.com/p/vinyl-uridine

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 <u>5-ethynyl-uridine (EU)</u>.

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 electrondemand Diels-Alder cycloaddition reaction (IEDDA) between the vinyl group and fluorescently or biotin-labeled <u>tetrazines</u>.

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 solidMolecular weight:270.24CAS number:5550-64-4Molecular formula:C11H14N2O6Solubility:DMSO, methanolQuality control:NMR <sup>1</sup> H and HPLC-MS (95+%)Storage conditions:24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks.		
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