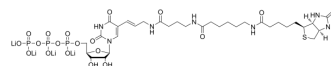


## Biotin-16-UTP

<b>Cat. No.:</b>	HY-D1686
<b>CAS No.:</b>	186033-13-6
<b>Molecular Formula:</b>	C <sub>32</sub> H <sub>48</sub> Li <sub>4</sub> N <sub>7</sub> O <sub>19</sub> P <sub>3</sub> S
<b>Molecular Weight:</b>	987.51
<b>Target:</b>	DNA Stain
<b>Pathway:</b>	Cell Cycle/DNA Damage
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Biotin-16-UTP is an active substrate for RNA polymerase. Biotin-16-UTP can replace UTP in the in vitro transcription reaction for RNA labeling <sup>[1]</sup> .
<b>In Vitro</b>	<p>Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).</p> <p>In Vitro RNA Synthesis and Purification:</p> <ol style="list-style-type: none"> <li>1. Incubate the cells according to your normal protocol.</li> <li>2. Add gently One volume of transcription buffer 2x [200 mM KCl, 20 mM Tris-HCl, pH 8.0, 5 mM MgCl<sub>2</sub>, 4 mM dithiothreitol (DTT), 4 mM each of ATP, GTP and CTP, 200 mM sucrose and 20% glycerol] to nuclei in ice, form mixture.</li> <li>3. Add 8 μL biotin-16-UTP (from 10 mM tetralithium sal) to the mixture, which is incubated for 30 min at 29°C.</li> <li>4. Add 6 μL 250 mM CaCl<sub>2</sub>, 6 μL RNase-free DNase I (10 U/μL) and incubating for 10 min at 29°C to stop reaction.</li> <li>5. Perform RNA purification of both nuclear run-on and total RNA according to the manufacturer's instructions.</li> <li>6. Resuspend RNA in 50 uL diethylpyrocarbonate (DEPC)-treated water.</li> <li>7. Labeled RNA was captured by streptavidin-coated magnetic beads.</li> <li>8. RNA-binding beads are then used for random hexamer primed reverse transcription.</li> </ol> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### REFERENCES

[1]. G Patrone, et al. Nuclear run-on assay using biotin labeling, magnetic bead capture and analysis by fluorescence-based RT-PCR. *Biotechniques*. 2000 Nov;29(5):1012-4, 1016-7.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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