## **Product** Data Sheet

## Biotin-16-UTP tetrasodium

Cat. No.: HY-D1686B

Molecular Formula: C<sub>32</sub>H<sub>48</sub>N<sub>7</sub>Na<sub>4</sub>O<sub>19</sub>P<sub>3</sub>S

Molecular Weight: 1051.7

Target: DNA Stain

Pathway: Cell Cycle/DNA Damage
Storage: Solution, -20°C, 2 years

## **BIOLOGICAL ACTIVITY**

Description

Biotin-16-UTP tetrasodium is an active substrate for RNA polymerase. Biotin-16-UTP tetrasodium can replace UTP in the in vitro transcription reaction for RNA labeling<sup>[1]</sup>.

In Vitro

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

In Vitro RNA Synthesis and Purification:

- 1. Incubate the cells according to your normal protocol.
- 2. Add gently One volume of transcription buffer 2x [200 mM KCI, 20 mM Tris-HCI, pH 8.0, 5 mM MgCl2, 4 mM dithiothreitol (DTT), 4 mM each of ATP, GTP and CTP, 200 mM sucrose and 20% glycerol] to nuclei in ice, form mixture.
- 3. Add 8 µL biotin-16-UTP (from 10 mM tetralithium sal) to the mixture, which is incubated for 30 min at 29°C.
- 4. Add 6  $\mu$ L 250 mM CaCl2, 6  $\mu$ L RNase-free DNase I (10 U/ $\mu$ L) and incubating for 10 min at 29°C to stop reaction.
- $5.\ Perform\ RNA\ purification\ of\ both\ nuclear\ run-on\ and\ total\ RNA\ according\ to\ the\ manufacturer's\ instructions.$
- ${\it 6. Resuspend RNA in 50 uL\ diethylpyrocarbonate\ (DEPC)-treated\ water.}$
- 7. Labeled RNA was captured by streptavidin-coated magnetic beads.
- 8. RNA-binding beads are then used for random hexamer primed reverse transcription.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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

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Inhibitors