

## Product Datasheet

### Biotin-16-dUTP (orb64051)

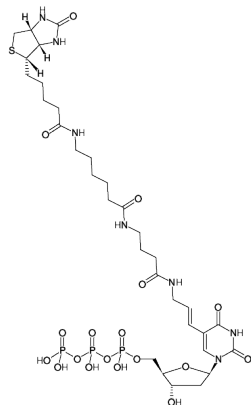
<b>Description</b>	Biotin-16-dUTP is enzymatically incorporated into DNA/cDNA as sub-stitute for its natural counterpart dTTP. The resulting Biotin-labeled DNA/cDNA probes are subsequently detected using streptavidin conjugated with horseradish peroxidase (HRP), alkaline phosphatase (AP), a fluorescent dye or agarose/magnetic beads. Optimal substrate properties and thus labeling efficiency as well as an efficient detection of the Biotin moiety is ensured by a 16-atom linker attached to the C5 position of uridine. Recommended Biotin-16-dUTP/dTTP ratio for PCR and Nick Translation: 50% Biotin-16-dUTP/50% dTTP.
<b>Form/Appearance</b>	filtered solution (30 kDa) in water; Color: colorless to slightly yellow; pH: 7.5 ± 0.5
<b>Concentration</b>	1.0 mM-1.1 mM
<b>Storage</b>	store at -20 °C
<b>Note</b>	For research use only
<b>Application notes</b>	Incorporation into DNA/cDNA by: PCR with Taq polymerase & in-house data; Nick Translation with DNase I/DNA Polymerase I & in-house data; Primer Extension with Klenow exo-; 3'-End Labeling with Terminal deoxynucleotidyl Transferase (TdT); Reverse Transcription with MMLV Reverse Transcriptase. Incorporation into RNA by 3'-End Labeling with Terminal deoxynucleotidyl Transferase (TdT). Spectroscopic Propertie: $\lambda_{max}$ 240 nm, $\epsilon$ 10.7 L mmol <sup>-1</sup> cm <sup>-1</sup> (Tris-HCl, pH 7.5).
<b>Formula</b>	C <sub>32</sub> H <sub>52</sub> N <sub>7</sub> O <sub>18</sub> P <sub>3</sub> S
<b>Purity</b>	≥ 98% (HPLC)
<b>MW</b>	Theoretical MW: 947.78 g/mol (free acid); Detected MW: 947.23 g/mol (free acid)
<b>SMILES</b>	C1[C@H]2[C@@H]([C@@H](S1)CCCC(=O)NCCCCC(=O)NCCCC(=O)NC/C=C/c1c(=O)[nH]c(=O)n([C@H]3C[C@@H]([C@H](O3)COP(=O)(OP(=O)(OP(=O)(O)O)O)O)c1)NC(=O)N2

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**Hazard Information** Non-Toxic**Expiration Date** 12 months from date of receipt.

Structural formula of Biotin-16-dUTP

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