

## Product Datasheet

### Biotin-16-dCTP (orb1733852)

<b>Catalog Number</b>	orb1733852
<b>Category</b>	Small Molecules
<b>Description</b>	Biotin-16-dCTP is enzymatically incorporated into DNA/cDNA as sub-stitute for its natural counterpart dCTP. 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 cytidine. Recommended Biotin-16-dCTP/dCTP ratio for PCR: 50% Biotin-16-dCTP/50% dCTP.
<b>Form/Appearance</b>	filtered solution (30 kDa) in 10 mM Tris-HCl; Color: colorless to slightly yellow; pH: 7.5 ± 0.5
<b>Concentration</b>	1.0 mM-1.1 mM
<b>Purity</b>	≥ 95% (HPLC)
<b>MW</b>	Theoretical MW: 944.78 g/mol (free acid); Detected MW: 944.23 g/mol (free acid)
<b>Application notes</b>	Incorporation into DNA/cDNA by: PCR with Taq polymerase in-house data; Nick Translation with DNase I/DNA Polymerase I; Primer Extension with Klenow exo-; 3'-End Labeling with Terminal deoxynucleotidyl Transferase (TdT); Reverse Transcription with MMLV Reverse Transcriptase. Spectroscopic Properties: λ <sub>max</sub> 294 nm, ε 9.3 L mmol <sup>-1</sup> cm <sup>-1</sup> (Tris-HCl, pH 7.5).
<b>Formula</b>	C <sub>32</sub> H <sub>51</sub> N <sub>8</sub> O <sub>17</sub> P <sub>3</sub> S
<b>SMILES</b>	C1[C@H]2[C@@H]([C@@H](S1)CCCC(=O)NCCCCC(=O)NCCCC(=O)NCC#Cc1cn(c(=O)nc1N)[C@@H]1O[C@H](COP(=O)(O)OP(=O)(O)OP(=O)(O)O)[C@@H](O)C1)NC(=O)N2

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<b>Storage</b>	store at -20 °C. Short term exposure (up to 1 week cumulative) to ambient temperature possible
<b>Note</b>	For research use only
<b>Expiration Date</b>	12 months from date of receipt.

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