

Product Datasheet

Biotin-16-dCTP (orb64049)

Catalog Number	orb64049
Category	Small Molecules
Description	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.
Form/Appearance	Liquid
Concentration	1.0 mM-1.1 mM
Buffer/Preservatives	Filtered solution (30 kDa) in 10 mM Tris-HCl. Color: colorless to slightly yellow. pH: 7.5 ± 0.5
Purity	≥ 95% (HPLC)
MW	Theoretical MW: 944.78 g/mol (free acid); Detected MW: 944.23 g/mol (free acid)
Application notes	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 _{max} 294 nm, ε 9.3 L mmol ⁻¹ cm ⁻¹ (Tris-HCl, pH 7.5).
Formula	C ₃₂ H ₅₁ N ₈ O ₁₇ P ₃ S (free acid)
Storage	store at -20 °C
Note	For research use only

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