

Product Datasheet

Biotin-16-dCTP (orb64049)

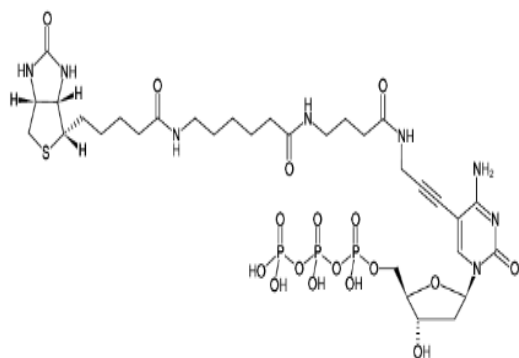
| | |
|--------------------------|--|
| Description | Biotin-16-dCTP is enzymatically incorporated into DNA/cDNA as sub-stitute for its natural counterpart dCTP. The resulting Biotin-labeled DNA/cDNA probes are subsequently detected using streptavidin conjugated with horseradish peroxidase (HRP), alkaline 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 | filtered solution (30 kDa) in 10 mM Tris-HCl; Color: colorless to slightly yellow; pH: 7.5 ± 0.5 |
| Concentration | 1.0 mM-1.1 mM |
| Storage | store at -20 °C |
| Note | For research use only |
| 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 |
| Purity | ≥ 95% (HPLC) |
| MW | Theoretical MW: 944.78 g/mol (free acid); Detected MW: 944.23 g/mol (free acid) |
| SMILES | 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 |
| Expiration Date | 12 months from date of receipt. |

Biorbyt Ltd.

7 Signet Court, Swann's Road,
Cambridge, CB5 8LA, United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\) 1223 859-353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

Biorbyt LLC.

68 TW Alexander Drive,
Durham, NC, 27713, United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+1(415)9065211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)



Chemical structure of using Biotin-16-dCTP (Biotin) (Small Molecules)

Biorbyt Ltd.

7 Signet Court, Swann's Road,
Cambridge, CB5 8LA, United Kingdom
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+44 \(0\) 1223 859-353](tel:+44(0)1223859353) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)

Biorbyt LLC.

68 TW Alexander Drive,
Durham, NC, 27713, United States
Email: info@biorbyt.com, support@biorbyt.com
Phone: [+1 \(415\) 906-5211](tel:+1(415)9065211) | Fax: [+1 \(415\) 651-8558](tel:+1(415)6518558)