

Product Datasheet

Biotin-14-dATP (orb1733817)

Catalog Number	orb1733817
Category	Small Molecules
Description	Biotin-14-dATP is enzymatically incorporated into DNA/cDNA as sub-stitute for its natural counterpart dATP. 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 sub-strate properties for Nick Translation are ensured by a 14-atom linker attached to the N6 position of adenine. For PCR incorporation experiments e.g. with Taqpolymerase Biotin-11-dATP is recommended whose Biotin moiety is attached to the N7-Deaza position of adenine via a 11-atom linker. Recommended Biotin-14-dATP/dATP ratio for Nick Translation: 50% Biotin-14-dATP/50% dATP.
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
Purity	≥ 95% (HPLC)
MW	Theoretical MW: 929.81 g/mol (free acid); Detected MW: 929.27 g/mol (free acid)
Application notes	Incorporation into DNA/cDNA by: Nick Translation with DNase I/DNA Polymerase I & in-house data; Primer Extension with Klenow fragment. Spectroscopic Propertie: λ _{max} 266 nm, ε 16.2 L mmol ⁻¹ cm ⁻¹ (Tris-HCl, pH 7.5).
Formula	C ₃₂ H ₅₄ N ₉ O ₁₅ P ₃ S
SMILES	OP(=O)(O)OP(=O)(O)OP(=O)(O)OC[C@H]1O[C@@H](n2cnc3c(NCCCCCNC(=O)CCCCNC(=O)CCCC[C@@H]4SC[C@@H]5NC(=O)N[C@H]45)ncnc23)C[C@@H]1O

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

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