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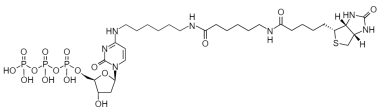
Product Information Sheet

Ordering Information

Product Number:	17019
Product Name:	Biotin-14-dCTP *1 mM in Tris Buffer (pH 7.5)*
Unit Size:	25 nmoles
Storage Conditions:	Freeze (<-15 °C), Desiccated, Avoid Light
Expiration Date:	6 months upon receiving

Chemical and Spectral Properties

Appearance:	Solid
Molecular Weight:	905.79
Chemical Structure:	
Soluble In:	Water
Excitation Wavelength:	N/A
Emission Wavelength:	N/A

Application Notes

The biotin-modified dCTP analogs are widely used for a variety of non-radioactive DNA labeling reactions including nick translation, random prime labeling, cDNA labeling and 3'-end labeling. The biotinylated probes have been shown to hybridize to homologous nucleic acid at the same rate and to the same extent as non-biotinylated probes. The hybridized biotinylated DNA probes can be detected by avidin and streptavidin. Biotin-14-dCTP is enzymatically incorporated into DNA/cDNA as substitute for 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. The 14-atom spacer between the N4 position of cytosine and biotin tag seperates the CTP base from the biotin tag ensuring the optimal properties for Nick Translation. For PCR incorporation experiments with Taq polymerase, 50% Biotin-14-dCTP/ 50% dCTP ratio might be used for Nick Translation. Alternatively, you might determine the best ratio under your test conditions.