

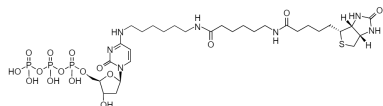
**Biotin-14-dCTP \*1 mM in Tris Buffer (pH 7.5)\***Catalog number: 17019  
Unit size: 25 nmoles**Product Details**

Storage Conditions	Freeze (<15 °C), Minimize light exposure
Expiration Date	6 months upon receiving

**Chemical Properties**

Appearance	Colorless liquid
Molecular Weight	905.79
Soluble In	Water

## Chemical Structure

**Applications**

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 separates 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.