

Research use only. Not for use in diagnostic procedures.

BIOTIN-11-ddUTP

Product Number: NEL547001EA

QUANTITY: 25 nmol FORM: 25 μ L solution CONCENTRATION: 1.0 mM SOLVENT: 10 mM Tris-HCl, pH 7.6, 0.1 mM EDTA FORMULA: C₂₈H₄₃N₆O₁₆P₃S FW = 844 EXTINCTION COEFFICIENT: 13,000 M⁻¹cm⁻¹ (289 nm, Phosphate buffer, pH 7)

INTRODUCTION

2',3'-dideoxynucleotide analogs are biologically active with a variety of DNA polymerases and are chain terminators. Some analogs demonstrate variations in relative performance depending upon nucleotide and label (fluorophore or hapten) selected due to enzyme preferences. Dideoxynucleotide analogs may be used in a variety of applications which allow determination of a genetic profile based on single nucleotide polymorphisms (SNP). These analogs are intended to be detected either directly by their fluorescence when using a fluorescently labeled analog or indirectly when appropriately labeled antibodies or streptavidin are available. Indirect detection may be either colorimetric, chemi-luminescence, or fluorescence. Signal amplification may be obtained using NEN's patented Tyramide Signal Amplification process (TSATM).

Quality Control

The nucleotide analog is purified by HPLC chromatography. Analytical HPLC is used as a quality control check to ensure chemical and isomeric purity >95%. UV/VIS absorption spectra are obtained in aqueous phosphate buffer to determine concentration. Relative fluorescence quantum yields are not necessarily the same for the four different base nucleotide analogs.

Stability and Storage Conditions

Nucleotides labeled with fluorophores should be protected from extended exposure to light. These nucleotide analogs are stable kept in a refrigerator or colder for at least 1 year. Minimizing freeze-thaw cycles and exposure to light are most critical factors to consider for long term usage.

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