DNA Labeling Reagent, DLR
(Biotin-11-dXTP)
Product Number 79015
Brief Protocol
DNA Labeling Reagent, DLR, is a proprietary biotin-labeled, abasic, deoxynucleotide analog designed for efficient 3' end-labeling of DNA using Terminal Deoxynucleotidyl Transferase (TdT) after amplification reactions such as PCR. When used with streptavidin conjugated to a reporter, the 3' biotin labeled DNA fragment can be detected by enzyme activity, fluorescence, or by the binding of a secondary antibody. In addition, DLR will not base-pair with natural nucleotides, thus reducing non-specific binding and maximizing the signal-to-noise ratio. DLR is a component of the Affymetrix GeneChip® DNA labeling reagent (PN 900542) and has been used extensively to successfully probe microarrays for decades.

Protocol
1. For a 50 µl reaction, add the following components on ice in the order indicated:
   - Nuclease-free Water (PN 71786) up to 50 µl
   - 5X TdT Buffer (PN 72035) 10 µl
   - DLR (PN 79015) 2 µl
   - Template dsDNA 1 µg
   - TdT (PN 72033) 2.5 µl
2. Gently mix the tube and centrifuge to collect the contents at the bottom of the tube.
3. Incubate at 37°C for 30 to 60 min.
4. Stop the reaction by adding EDTA to 20mM or by heating to 70°C for 10 min.
5. Purify labeled DNA (if desired) by ethanol precipitation or with the PrepEase® DNA Cleanup Kit (PN 78758).