

# GeneChip® WT Double-Stranded DNA Terminal Labeling Kit

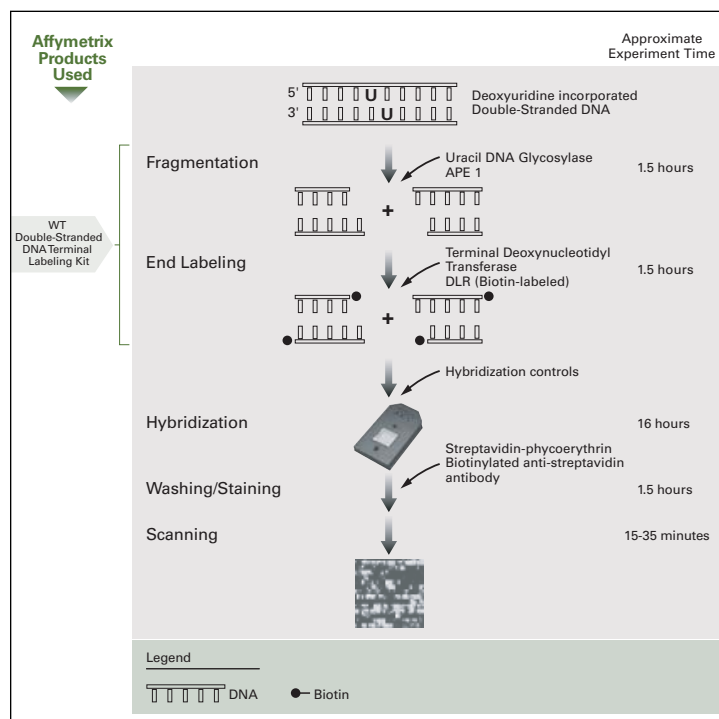


Figure 1. GeneChip® WT Double-Stranded DNA Terminal Labeling Schematic



## INTRODUCTION

The GeneChip® WT (Whole Transcript) Double-Stranded DNA Terminal Labeling Kit is optimized for use in the fragmentation and labeling steps of the GeneChip WT Double-Stranded Target Assay and the GeneChip WT Amplified Double-Stranded Target Assay. These assays are designed to generate targets compatible with GeneChip® Tiling Arrays. When used in combination with GeneChip Tiling Arrays, the WT Double-Stranded Target Assay and WT Amplified Double-Stranded Target Assay can provide unbiased transcript mapping results on a genome-wide scale.

The WT Double-Stranded DNA Terminal Labeling Kit employs a strategy for reproducible DNA fragmentation with a combination of uracil DNA glycosylase (UDG) and apurinic/aprimidinic endonuclease 1 (APE 1), as shown in Figure 1. The typical input material is random-primed, double-stranded cDNA, which can be obtained using the GeneChip WT Double-Stranded cDNA Synthesis Kit (P/N 900813) or GeneChip WT Amplified Double-Stranded cDNA Synthesis Kit (P/N 900811), both available from Affymetrix. These GeneChip cDNA synthesis kits incorporate deoxyuridine at predefined ratios relative to thymidine. Following fragmentation, the resulting fragmented DNA can then be labeled using terminal deoxynucleotidyl transferase (TdT) in the presence of a proprietary biotinylated compound, GeneChip DNA Labeling Reagent. Both components are provided in the WT Double-Stranded cDNA Terminal Labeling Kit. The final labeled DNA target is ready to be added to the cocktail for hybridization to GeneChip Tiling Arrays.

Detailed procedures for this assay are described in the *GeneChip® WT Double-Stranded Target Assay Technical Manual* (P/N 702179), available online at [www.affymetrix.com](http://www.affymetrix.com).

## ORDERING INFORMATION

P/N	Size	Kits
900812	30 Reactions	GeneChip® WT Double-Stranded DNA Terminal Labeling Kit

## KIT COMPONENTS

Component	Volume
10X cDNA Fragmentation Buffer	144 µL
UDG, 10 U/µL	45 µL
APE 1, 100 U/µL	68 µL
5X TdT Buffer	360 µL
TdT, 30 U/µL	60 µL
GeneChip® DNA Labeling Reagent, 5 mM	30 µL
RNase-free Water	825 µL

## ADDITIONAL AFFYMETRIX® REAGENTS ORDERED SEPARATELY

Kit	P/N	Size
GeneChip® WT Double-Stranded cDNA Synthesis Kit	900813	30 Reactions
GeneChip® WT Amplified Double-Stranded cDNA Synthesis Kit	900811	10 Reactions
GeneChip® Sample Cleanup Module	900371	30 Reactions
GeneChip® Control Oligo B2, 3 nM	900301	30 Reactions

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**STORAGE**

Kit should be kept at -20°C in a non-frost-free freezer. Performance of the kit components has been shown to be unaffected for up to eight freeze-thaw cycles.

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**FUNCTIONAL TESTING**

Each lot of kits is functionally tested in the GeneChip assay following the recommended protocol.

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**SAFETY INFORMATION**

Material Safety Data Sheet(s) is sent only on the first shipment, unless a substantial revision occurs. If the product is a kit or is supplied with more than one material, please refer to the MSDS for each component for hazard information.


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