

## GeneChip® HT WT Terminal Labeling Kit

P/N 901555 (24 Reaction Format)  
P/N 901518 (96 Reaction Format)

### Introduction

The GeneChip® HT WT (Whole Transcript) Terminal Labeling Kit is optimized to be used for the fragmentation and labeling steps of the Ambion® WT Expression Kit. This assay is designed to generate targets compatible with GeneChip arrays and GeneTitan™ array plates with probes interrogating the entire length of any transcript on the whole genome scale.

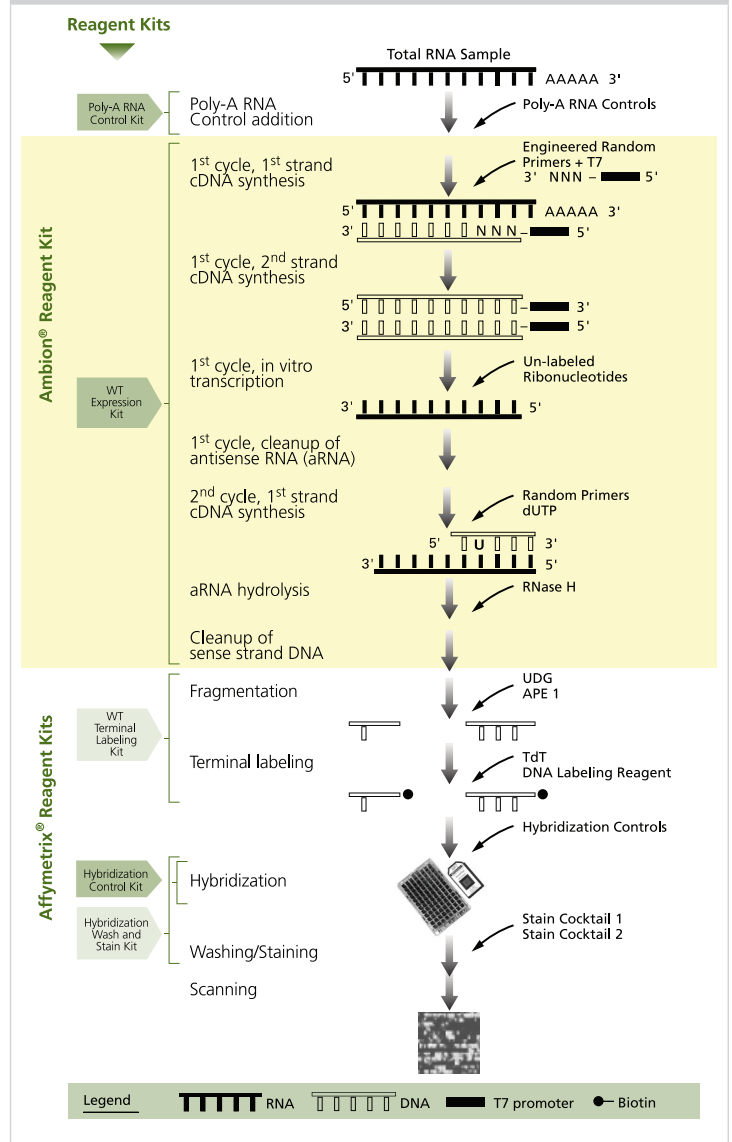
Key characteristics of the Ambion® WT Expression Kit combined with the Affymetrix® GeneChip® WT Terminal Labeling Kit are:

- The robust assay and reagents generate sufficient sense DNA targets from 50 ng of total RNA to be hybridized to a single Gene ST or Exon ST Array.
- No ribosomal removal required.
- Magnetic bead-based purification for enhanced recovery.
- Preformulated master mixes significantly reduce hands-on time.
- Complete reagent kits are available including poly-A RNA controls and hybridization controls for an optimal balance of array detection sensitivity and specificity.

The HT WT Terminal Labeling Kit employs a strategy for reproducible DNA fragmentation with a combination of uracil DNA glycosylase (UDG) and apurinic/apyrimidinic endonuclease 1 (APE 1), as shown in Figure 1. The typical input material is random-primed, single-stranded DNA, which can be obtained using the GeneChip® WT cDNA Synthesis and Amplification Kit (available separately from Affymetrix) that incorporates 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 also provided in the WT Terminal Labeling Kit. The final labeled DNA target is ready to be added to the cocktail for hybridizing to the arrays such as the Gene ST and Exon ST Arrays.

The GeneChip HT WT Terminal Labeling Kit is offered in two convenient configurations and generates target that can be hybridized to both cartridges and plates. There is a 96-reaction format, and a 24-reaction format. The reagents are filled in separate tubes to remove freeze-thaw cycle impact.

Figure 1. GeneChip® HT WT Terminal Labeling Assay



### Kit Components

#### GeneChip® HT WT (Whole Transcript) Terminal Labeling Kit

Component	24 Rxn Format	96 Rxn Format
10X cDNA Fragmentation Buffer	168 µL	624 µL
UDG, 10U/µL	50 µL	150 µL
APE 1, 1000U/µL	50 µL	150 µL
TdT, 30U/µL	100 µL	300 µL
5X TdT Buffer	384 µL	1,392 µL
DNA Labeling Reagent, 5mM	50 µL	150 µL

## Ordering Information

P/N	Component	Size
901555	GeneChip® HT WT Terminal Labeling Kit	24 Reactions
901518	GeneChip® HT WT Terminal Labeling Kit	96 Reactions
<b>Supporting Products</b>		
4440537	Ambion® WT Expression Kit for High-Throughput Robotics <sup>1</sup>	24 Reactions
4440536	Ambion® WT Expression Kit for High-Throughput Robotics <sup>1</sup>	96 Reactions
901622	GeneTitan™ Hybridization, Wash, and Stain Kit for WT Arrays <sup>2</sup>	96 Reactions
901583	GeneTitan™ Wash Buffers A and B Module	Sufficient for processing 1 array plate.
901647	HT WT Terminal Labeling and Control Bundle <sup>3</sup> <ul style="list-style-type: none"><li>GeneChip® HT WT Terminal Labeling Kit (P/N 901555, 24 Rxn)</li><li>GeneChip® Hybridization Control Kit (P/N 900454, 30 Rxn)</li><li>GeneChip® Poly-A RNA Control Kit (P/N 900433, 100 Rxn)</li></ul>	24 Reactions
901648	HT WT Terminal Labeling and Control Bundle <sup>3</sup> <ul style="list-style-type: none"><li>GeneChip® HT WT Terminal Labeling Kit (P/N 901518, 96 Rxn)</li><li>GeneChip® Hybridization Control Kit (P/N 900457, 150 Rxn)</li><li>GeneChip® Poly-A RNA Control Kit (P/N 900433, 100 Rxn)</li></ul>	96 Reactions

1. Available for purchase at [www.Ambion.com](http://www.Ambion.com).

2. Contains the GeneTitan™ Hybridization Module for WT Array Plates (P/N 901621) and the GeneTitan™ Wash Buffers A and B Module (P/N 901583). Part number 901583 is available for separate purchase.

3. Individual components available for purchase separately.

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## Storage, Handling and Stability

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

## Safety Information

A Material Safety Data Sheet(s) (MSDS) is available at [www.affymetrix.com](http://www.affymetrix.com). 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.

## Functional Testing

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

## Contact Information

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## Patents

Use of this kit in accordance with these instructions in preparing targets for GeneChip® probe arrays may be covered by U.S. patent numbers 5,545,522; 5,716,785; 5,891,636 and 6,291,170. Those who do not use this kit to prepare targets for GeneChip® probe arrays may be required to obtain a license under these patents. Products may be covered by U.S. Patent No. 6,864,059.

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