

GeneChip™ HT WT Terminal Labeling Kit

Pub. No. 702817 Rev. 4

WARNING! Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from thermofisher.com/support.

Introduction

The Applied Biosystems™ GeneChip™ HT WT Terminal Labeling Kit (high-throughput, whole transcript) is optimized to be used for the fragmentation and labeling steps of the 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 WT Expression Kit combined with the 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 GeneChip™ HT WT Terminal Labeling Kit uses 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 Thermo Fisher Scientific) 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 GeneChip™ 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 a target that can be hybridized to both cartridges and plates. Available are a 96-reaction format and a 24-reaction format. The reagents are filled in separate tubes to remove freeze-thaw cycle impact.

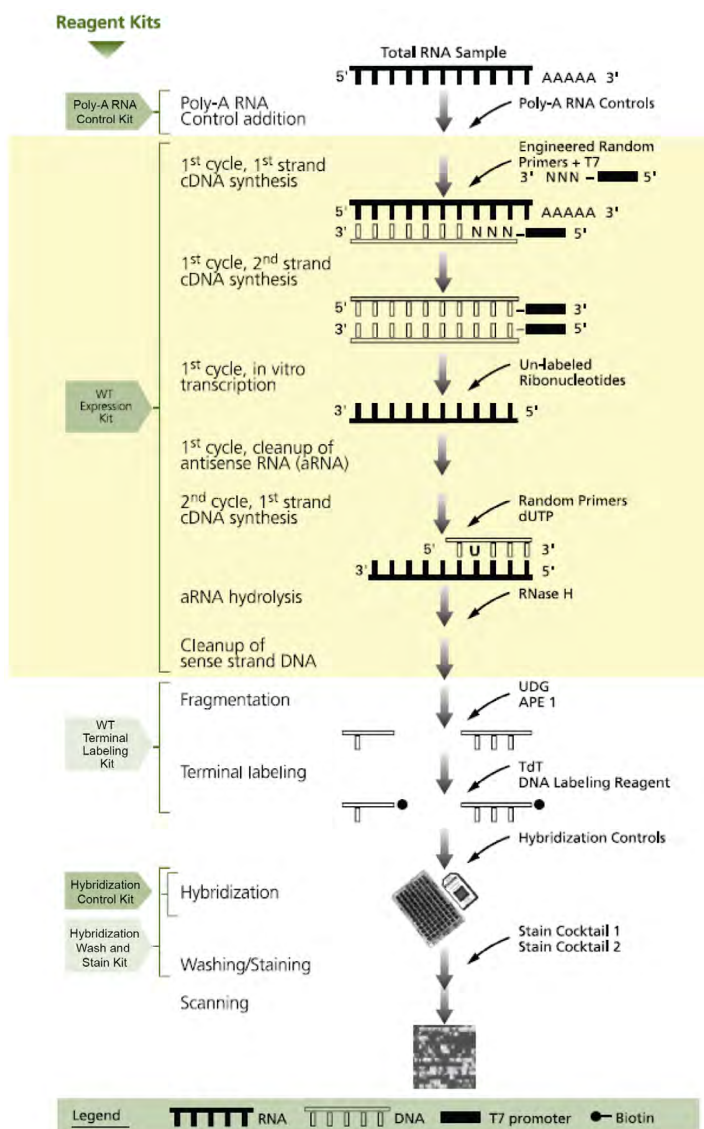


Fig. 1 GeneChip™ HT WT Terminal Labeling Assay.

Kit components

The following are the components of the GeneChip™ HT WT Terminal Labeling Kit.

Component	24 reaction format	96 reaction format
10X cDNA Fragmentation Buffer	205 µL	624 µL
UDG, 10 U/µL	50 µL	150 µL
APE 1, 1,000 U/µL	50 µL	150 µL
TdT, 30 U/µL	100 µL	300 µL
5X TdT Buffer	384 µL	1,392 µL
DNA Labeling Reagent, 5 mM	50 µL	150 µL

Ordering information

Unless otherwise indicated, all materials are available through thermofisher.com.

MLS: Fisher Scientific (fisherscientific.com) or other major laboratory supplier.

Cat. No.	Component	Size
4440537	WT Expression Kit for High Throughput	24 reactions
4440536	WT Expression Kit for High Throughput	96 reactions
901622	GeneTitan™ Hybridization, Wash, and Stain Kit for WT Array Plates ^[1]	96 reactions
901583	GeneTitan™ Wash Buffers A and B Module	Sufficient for processing 1 array plate.
901647	HT WT Terminal Labeling and Control Bundle <ul style="list-style-type: none">HT WT Terminal Labeling Kit (Part. No. 901555)GeneChip™ Hybridization Control Kit (Cat. No. 900454)GeneChip™ Poly-A RNA Control Kit (Cat. No. 900433, 100 rxn)	24 reactions
901648	HT WT Terminal Labeling and Control Bundle <ul style="list-style-type: none">HT WT Terminal Labeling Kit (Part No. 901518, 96 rxn)GeneChip™ Hybridization Control Kit (Cat. No. 900457, 150 rxn)GeneChip™ Poly-A RNA Control Kit (Cat. No. 900433, 100 rxn)	96 reactions

^[1] Contains the GeneTitan™ Hybridization Module for WT Array Plates (Cat. No. 901621) and the GeneTitan™ Wash Buffers A and B Module (Cat. No. 901583).

Storage, handling, and stability

Kit must 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.

Functional testing

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

Customer and technical support

Visit thermofisher.com/support for the latest in services and support, including:

- Worldwide contact telephone numbers
- Product support, including:
 - Product FAQs
 - Software, patches, and updates
 - Training for many applications and instruments
- Order and web support
- Product documentation, including:
 - User guides, manuals, and protocols
 - Certificates of Analysis
 - Safety Data Sheets (SDSs; also known as MSDSs)

Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at www.thermofisher.com/us/en/home/global/terms-and-conditions.html. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.



Thermo Fisher Scientific Baltics UAB | V.A. Graiciuno 8, LT-02241 | Vilnius, Lithuania

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Revision history: Pub. No. 702817

Revision	Date	Description
4	06 September 2017	Update document to current template. Update ordering information.
3	21 September 2011	Baseline for revision history.

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