

GeneChip® HT WT PLUS Reagent Kit (HT WT PLUS Kit)

An automated target preparation solution for expression analysis on Affymetrix' whole-transcriptome (WT) arrays

Transcriptome profiling using Affymetrix' WT arrays is a well-proven technique for expression research and biomarker discovery. However, as the number of samples per study increases, the need arises for a target preparation process that generates excellent results yet remains fast and efficient. The use of GeneChip® HT WT PLUS Reagent Kit in combination with the Beckman Coulter® Biomek® FX® Target Prep Express (TPE) System enables automation of the target preparation process, which significantly reduces the manual workload of the protocol. Using the automated protocol, researchers can process up to 96 samples in a single run with minimal hands-on time.

HT WT PLUS Kit uses a reverse transcription priming method that primes the entire length of each RNA transcript, including both poly-A and non-poly-A mRNA, to provide complete and unbiased coverage of the transcriptome. The kit is comprised of all the reagents needed for preparing hybridization-ready targets from 50 to 500 ng of total RNA. The kit efficiently generates amplified and biotinylated sense-stranded DNA targets from total RNA extracted from a wide range of samples, including

fresh frozen tissues, cell lines, and whole blood without up-front selection or an enrichment step for mRNA or a globin reduction step for blood samples.

Features and benefits:

- A complete target preparation kit with proven sensitivity and specificity due to an optimized chemistry for use with Affymetrix' WT arrays
- Automated protocol enables the processing of up to 96 samples with minimal hands-on time
- Ability to run a variety of sample types, including clinically relevant samples such as whole blood, to enable robust biomarker identification
- Low sample input requirement (50 ng), allowing you to save your precious samples for further downstream studies
- No requirement for ribosomal RNA depletion or a globin reduction step for blood samples

Specifications

cRNA yield	≥20 µg
cDNA yield	≥6.5 µg
% median CV	≤20%
Technical replicate signal correlation Pearson R	≥0.90
Sample type	Total RNA from tissue, cell line, and whole blood*
Minimum sample input	50 ng
Sample input range	50 ng–500 ng
Supported array platforms	Cartridge and plate

*Collected in PAXgene, Tempus™, EDTA, or sodium heparin tubes.

Figure 1: The following signal correlation and fold-change correlation plots with excellent Pearson r values between Affymetrix internal laboratory and three external research centers, demonstrating a performance consistency. At each external site, replicates of hybridization to Affymetrix® Human Gene 2.1 ST Array.

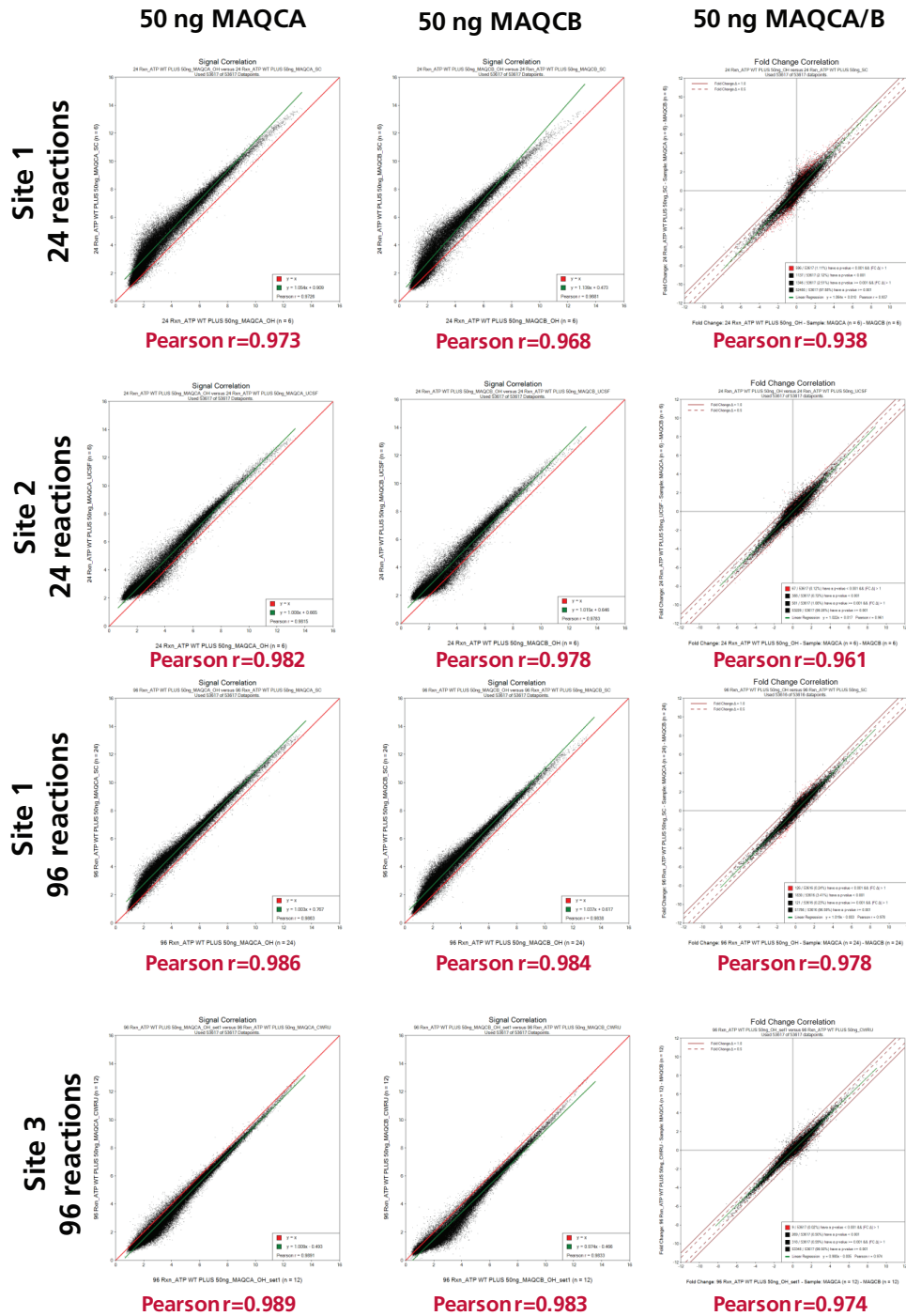


Table 2: The following coefficient of variation table demonstrates HT WT PLUS Reagent Kit's consistent assay performance when run at external sites. Hybridization targets were prepared from 50 ng MAQCA and MAQCB total RNA by four sites (Affymetrix, Site 1, Site 2, and Site 3). Technical replicates were hybridized on Affymetrix® Human Gene 2.1 ST Array. Median coefficient of variation was calculated using all probe sets.

Condition		Number of replicates	Gene-level median coefficient of variation
Affymetrix	MAQCA	24 reactions	12.40%
Affymetrix	MAQCB	24 reactions	14.00%
Affymetrix	MAQCA	96 reactions	16.40%
Affymetrix	MAQCB	96 reactions	16.90%
Site 1	MAQCA	24 reactions	13.42%
Site 1	MAQCB	24 reactions	13.27%
Site 1	MAQCA	96 reactions	16.65%
Site 1	MAQCB	96 reactions	17.87%
Site 2	MAQCA	24 reactions	9.90%
Site 2	MAQCB	24 reactions	9.50%
Site 3	MAQCA	96 reactions	14.02%
Site 3	MAQCB	96 reactions	14.14%

% median CV specification

20%

Ordering information

Part number	Description	Details
902281	GeneChip® HT WT PLUS Reagent Kit	24 reactions
902414	GeneChip® HT WT PLUS Reagent Kit	96 reactions

Related products

Part number	Description	Details
900720	GeneChip® Hybridization, Wash, and Stain Kit	Sufficient for 30 reactions
901622	GeneTitan® Hybridization, Wash, and Stain Kit for WT Array Plates	Sufficient for 96 reactions
902508	Affymetrix® HT WT PLUS Consumables for Biomek® FXP Target Prep Express	Sufficient for 4x24 or 4x96 reactions

Recommended WT cartridge arrays

Part number	Description	Details
902233	GeneChip® Human Transcriptome Array 2.0	Contains 2 arrays
902162	GeneChip® Human Transcriptome Array 2.0	Contains 10 arrays
902112	GeneChip® Human Gene 2.0 ST Array	Contains 6 arrays
902113	GeneChip® Human Gene 2.0 ST Array	Contains 30 arrays
902118	GeneChip® Mouse Gene 2.0 ST Array	Contains 6 arrays
902119	GeneChip® Mouse Gene 2.0 ST Array	Contains 30 arrays
902124	GeneChip® Rat Gene 2.0 ST Array	Contains 6 arrays
902125	GeneChip® Rat Gene 2.0 ST Array	Contains 30 arrays

Recommended WT array plates

Part number	Description	Details
902136	Human Gene 2.1 ST 16-Array Plate and Trays	Contains 16 arrays
902137	Human Gene 2.1 ST 24-Array Plate and Trays	Contains 24 arrays
902138	Human Gene 2.1 ST 96-Array Plate and Trays	Contains 96 arrays
902139	Mouse Gene 2.1 ST 16-Array Plate and Trays	Contains 16 arrays
902140	Mouse Gene 2.1 ST 24-Array Plate and Trays	Contains 24 arrays
902141	Mouse Gene 2.1 ST 96-Array Plate and Trays	Contains 96 arrays
902142	Affymetrix Rat Gene 2.1 ST 16-Array Plate and Trays	Contains 16 arrays
902143	Affymetrix Rat Gene 2.1 ST 24-Array Plate and Trays	Contains 24 arrays
902144	Affymetrix Rat Gene 2.1 ST 96-Array Plate and Trays	Contains 96 arrays

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