

GeneChip® Mapping  
250K Nsp Assay Kit  
GeneChip® Mapping  
250K Sty Assay Kit



### INTENDED USE

The GeneChip® Mapping 500K Array Set consists of two arrays and two reagent kits that enable genotyping of greater than 500,000 Single Nucleotide Polymorphism (SNP) loci with a single primer. Each array and its corresponding kit are capable of genotyping on average 250,000 SNPs (approximately 262,000 for Nsp arrays and 238,000 for Sty arrays). The GeneChip® Mapping 250K Assay Kits provide users with the reagents necessary to selectively amplify a portion of the human genome, and to fragment and label the PCR products. The GeneChip Mapping 250K Assay Kits also provide a human genomic reference DNA and an Oligonucleotide Control Reagent for hybridization.

These products are for research purposes only and not intended for use in the diagnosis of a disease.

Please refer to the *GeneChip® Mapping 500K Assay Manual* (P/N 701930) for procedures on DNA target preparation, target hybridization, fluidics setup, array scanning, and data analysis instructions for processing GeneChip Human Mapping 250K Arrays.

The table below shows the corresponding array and reagent kits.

Array	Reagent Kit
GeneChip® Human Mapping 250K Nsp Array	GeneChip® Mapping 250K Nsp Assay Kit
GeneChip® Human Mapping 250K Sty Array	GeneChip® Mapping 250K Sty Assay Kit

### COMPONENTS

Please look up the part number on box cover, and refer to appropriate column on the table below to find the exact components of that kit.

GeneChip® Mapping 250K Assay Kits	Nsp P/N 900766 30 Rxns	Sty P/N 900765 30 Rxns
<b>Box 1</b> (store in a room free of DNA templates)	Adaptor, Nsp (50 µM) P/N 900596 - Volume 25 µL	Adaptor, Sty (50 µM) P/N 900597 - Volume 25 µL
	PCR Primer, 002 (100 µM) P/N 900595 - Volume 450 µL	
<b>Box 2</b> (store in a room free of PCR amplicons)	Reference Genomic DNA, 103 (50 ng/µL) P/N 900421 - Volume 30 µL	
<b>Box 3</b> (may store in a room with PCR amplicons)	GeneChip® Fragmentation Reagent (see tube label for unit concentration) P/N 900131 - Volume 25 µL	
	10X Fragmentation Buffer P/N 900422 - Volume 250 µL	
	GeneChip® DNA Labeling Reagent (30 mM) P/N 900778 - Volume 60 µL	
	Terminal Deoxynucleotidyl Transferase (30 U/µL) - P/N 901023 - Volume 110 µL	
	5X Terminal Deoxynucleotidyl Transferase Buffer - P/N 901022 - Volume 420 µL	
	Oligonucleotide Control Reagent 0100- P/N 900541 - Volume 60 µL	

GeneChip® Mapping 250K Assay Kits	Nsp P/N 900753 100 Rxns	Sty P/N 900754 100 Rxns
<b>Box 1</b> (store in a room free of DNA templates)	Adaptor, Nsp (50 µM) P/N 900697 - Volume 75 µL	Adaptor, Sty (50 µM) P/N 900698 - Volume 75 µL
	PCR Primer, 002 (100 µM) - P/N 900702 Qty 2 vials - Volume 750 µL per vial	
<b>Box 2</b> (store in a room free of PCR amplicons)	Reference Genomic DNA, 103 (50 ng/µL) P/N 900421 - Volume 30 µL	
<b>Box 3</b> (may store in a room with PCR amplicons)	GeneChip® Fragmentation Reagent (see tube label for unit concentration) P/N 900131 - Volume 25 µL	
	10X Fragmentation Buffer P/N 900695 - Volume 835 µL	
	GeneChip® DNA Labeling Reagent (30 mM) P/N 900699 - Volume 200 µL	
	Terminal Deoxynucleotidyl Transferase (30 U/µL) - P/N 901024 - Volume 420 µL	
	5X Terminal Deoxynucleotidyl Transferase Buffer - P/N 900696 - Qty 2 vials Volume 700 µL per vial	
	Oligonucleotide Control Reagent 0100- P/N 900701 - Volume 200 µL	

### INSTRUCTIONS FOR USE

Please refer to the *GeneChip® Mapping 500K Assay Manual* (P/N 701930) for procedures on processing DNA and oligonucleotide controls.

## ORDERING INFORMATION

P/N	Product Name	Description
<b>ASSAY KITS</b>		
900766	GeneChip® Mapping 250K Nsp Assay Kit	Sufficient for 30 reactions
900753	GeneChip® Mapping 250K Nsp Assay Kit	Sufficient for 100 reactions
900765	GeneChip® Mapping 250K Sty Assay Kit	Sufficient for 30 reactions
900754	GeneChip® Mapping 250K Sty Assay Kit	Sufficient for 100 reactions
<b>SUPPORTING PRODUCTS</b>		
520330	GeneChip® Human Mapping 250K Nsp Array	Contains 1 Mapping 250K Nsp Array*
520331	GeneChip® Human Mapping 250K Sty Array	Contains 1 Mapping 250K Sty Array*
900767	GeneChip® Human Mapping 250K Nsp Array	Contains 5 Mapping 250K Nsp Arrays
900768	GeneChip® Human Mapping 250K Nsp Array	Contains 30 Mapping 250K Nsp Arrays
900769	GeneChip® Human Mapping 250K Sty Array	Contains 5 Mapping 250K Sty Arrays
900770	GeneChip® Human Mapping 250K Sty Array	Contains 30 Mapping 250K Sty Arrays
690031	GeneChip® Operating Software (GCOS)	GCOS is the core operating software for the GeneChip system, providing instrument control, image analysis, and workflow/sample management.
690051	GeneChip® Genotyping Analysis Software (GTYPE)	GTYPE provides data analysis for Affymetrix® GeneChip DNA Arrays, including automated SNP analysis with quality scores.

\*200 order minimum

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## PRECAUTIONS

**IMPORTANT:** The GeneChip Fragmentation Reagent and the Terminal Deoxynucleotidyl Transferase contain active enzymes. The following precautions are recommended to ensure optimal activity:

- store at –20°C (do not store at –80°C)
  - minimize repeated exposure to temperatures > 0°C
  - use a benchtop cooler when handling the reagent
1. **GENECHIP PROBE ARRAYS ARE FOR RESEARCH USE ONLY; NOT FOR DIAGNOSTIC PROCEDURES.**
  2. Avoid microbial contamination, which may cause erroneous results.
  3. **WARNING: All biological specimens and materials with which they come into contact should be handled as if capable of transmitting infection and disposed of with proper precautions in accordance with federal, state, and local regulations. This includes adherence to the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) for blood-derived and other samples governed by this act. Never pipet by mouth. Avoid specimen contact with skin and mucous membranes.**
  4. **CAUTION:** Exercise standard precautions when obtaining, handling, and disposing of potentially carcinogenic reagents.
  5. Exercise care to avoid cross-contamination of samples during all steps of this procedure, as this may lead to erroneous results.
  6. Use powder-free gloves whenever possible to minimize introduction of powder particles into sample or probe array cartridges.
  7. Three different reagent boxes are provided to allow storage of the components in a manner consistent with the recommended workflow to minimize the chance of DNA contamination.

## SAFETY INFORMATION

A Material Safety Data Sheet (MSDS) is available at [www.affymetrix.com](http://www.affymetrix.com). Caution: 5X Terminal Deoxynucleotidyl Transferase Buffer contains cacodylic acid. Warning: Harmful [75-60-5]

## STORAGE, HANDLING, AND STABILITY

The reagents contained in the GeneChip Mapping 250K Assay Kits are shipped on dry ice and should be stored at –20°C. Refer to the expiration date on the package label. Do not use reagent components after the expiration date.

**IMPORTANT: Store the unopened GeneChip Mapping 250K Assay Kits in a room that is free of PCR amplicons. The reagent components are separated into three boxes to support the recommended workflow, and minimize the chance of DNA contamination during use. Each of these three boxes has different recommended storage locations: Box 1 - store in a room free of DNA templates. Box 2 - store in a room free of PCR amplicons. Box 3 - may store in a room with PCR amplicons.**

## CONTACT INFORMATION

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## PATENTS

The reagents provided hereunder include a limited, nontransferable license to U.S. patent no. 6,107,023 and its foreign equivalents to purchaser for research and development use only by the purchaser. This limited license permits purchaser to amplify nucleic acids and consume the reagents provided with this kit and expires upon consumption of the reagents.

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