

The CytoScan® 750K Cytogenetics Solution

Join the resolution revolution

The CytoScan® 750K Cytogenetics Solution from Affymetrix enables cytogenetic researchers to detect and analyze relevant chromosomal aberrations with confidence. The CytoScan 750K Cytogenetics Solution provides high-resolution coverage of cancer and constitutional genes of interest along with high-density SNP coverage for loss of heterozygosity (LOH) detection.

Affymetrix developed the CytoScan 750K Cytogenetics Array to provide a cost-effective solution that delivers industry-leading performance. Like the CytoScan® HD Cytogenetics Solution, the CytoScan® 750K Array, reagents, and software were developed with input from the international cytogenetics community to deliver an intuitive platform for fast and reliable detection of chromosomal aberrations.

The CytoScan 750K Array offers:

- **Comprehensive gene-level coverage** – Comprehensive coverage for known constitutional and cancer genes on a single array
- **Proven performance** – Markers empirically selected from the CytoScan® HD Array with validation across thousands of samples
- **High-density SNPs** – Confident breakpoint determination, allelic confirmation of copy number changes, and >5 Mb of LOH

With comprehensive coverage for known constitutional and cancer genes on a single array, the CytoScan 750K Array provides the power to detect copy-neutral LOH, uniparental isodisomy (UPD), and regions identical-by-descent.

The CytoScan 750K Cytogenetics Solution is a complete cytogenetic microarray solution that includes the new CytoScan 750K Array, an optimized and streamlined assay, an all-inclusive reagent kit, the proven GeneChip® System 3000 instrumentation platform, state-of-the-art Affymetrix® Chromosome Analysis Suite (ChAS) Software for data visualization and analysis, and full service and support.

Features

Array

The CytoScan 750K Array contains probes which are empirically selected from the CytoScan HD Array, for more than 750,000



markers for copy number analysis which consist of 550,000 unique non-polymorphic probes and approximately 200,000 SNPs that fully genotype with greater than 99 percent accuracy.

Reagents

The complete and optimized CytoScan® 750K Reagent Kit* is designed to save you time and money, reduce operator error, and deliver performance exceeding cytogenetics community guidelines. The simple and streamlined assay protocol makes it easier to obtain consistent and high-quality results aligned with laboratory workflow requirements.

Software

The Affymetrix® Chromosome Analysis Suite (ChAS) Software was developed with input from cytogenetics experts, so it is tailored to cytogenetic research analysis and reporting. Features include an intuitive and streamlined analysis workflow, multiple graphical views, and flexible analysis options presented in an easy-to-understand graphical interface. With the easy-to-use software, it is simple to analyze data and generate custom reports based on your specific requirements.

*Clontech TITANIUM™ Taq ordered separately

Specifications

Markers for copy number analysis	
Total number of copy number markers	750,436
Number of non-polymorphic markers	550,000
Number of SNP markers	200,436
Total number of "genotype-able" SNP markers	200,436
Genome build	hg19
Autosomal markers	702,346
Pseudoautosomal markers	811
Intragenic markers	532,850
Intergenic markers	217,586
Average marker spacing (base pairs)	
Intragenic (within all the genes below)	1,737
ISCA constitutional genes	1,099
Cancer genes	1,269
OMIM Morbid genes	2,204
X chromosome OMIM Morbid genes	1,287
RefSeq genes	1,737
Intergenic (non-gene backbone)	6,145
Overall (gene and non-gene backbone)	4,127
Percentage of genes covered (25 markers/100 kb)	
ISCA constitutional genes (340)	100%
Cancer genes (526)	100%
OMIM Morbid genes (2,640)	83%
X chromosome OMIM Morbid genes (177)	93%
RefSeq genes (36,121)	80%

Ordering information

Part number	Product	Description
901859	CytoScan® 750K Array Kit and Reagent Kit Bundle Available outside US/Canada only	Arrays and reagents sufficient for 24 reactions
901860	CytoScan® 750K Training Kit Available outside US/Canada only	Arrays and reagents sufficient for 24 reactions plus training materials
N/A	Affymetrix® Chromosome Analysis Suite Software	Available as download from software web page
CytoScan® Training Products		
000802	CytoScan FAS On-site Training	FAS performs both on-site preparation and first week of training
000803	CytoScan FAS Assisted Training	FAS performs on-site site preparation. Customer completes training using self-paced tools.
CytoScan® Reagent Kit Components		
901803	Restriction and Ligation Reagents	
901718	Nsp I Enzyme	
901719	10X Nsp I Buffer	
901720	100X BSA	
901697	Low EDTA TE Buffer	
901723	T4 DNA Ligase Enzyme	
901722	10X T4 DNA Ligase Buffer	
901781	Water (Nuclease Free)	
901749	Ligation Adaptors and Fragmentation Reagents	
900697	Adaptor, Nsp (50 µM)	
901016	PCR Primer, 002 (100 µM)	
901010	Fragmentation Reagent	
900422	10X Fragmentation Buffer	
900699	DNA Labeling Reagent (30 nM)	
900696	Terminal Deoxynucleotidyl Transferase Buffer	
900541	Oligonucleotide Control Reagent 0100	
900421	Genomic DNA	
901826	Purification Reagents	
901738	Elution Buffer	
901781	Water (Nuclease Free)	
901372	Purification Wash Buffer	
901804	Hybridization Reagents	
901725	Hyb Buffer Part 1	
901726	Hyb Buffer Part 2	
901727	Hyb Buffer Part 3	
901728	Hyb Buffer Part 4	
901805	Stain Reagents	
901751	Stain Buffer 1	
901752	Stain Buffer 2	
901733	Array Holding Buffer	
901807	Purification Beads	
901806	Wash Reagents	
901680	Wash A Buffer	
901681	Wash B Buffer	
Additional components		
639243	Clontech TITANIUM™ DNA Amplification Kit (400 reactions)	Order directly from Clontech

Supporting products

Part number	Product name	Description
00-0218	GeneChip® 3000 7G with Workstation and AutoLoader	Includes: <ul style="list-style-type: none"> ▪ GeneChip® Scanner 3000 7G with AutoLoader ▪ 2D Handheld Barcode Reader ▪ GeneChip® Fluidics Station 450 ▪ GeneChip® Hybridization Oven 645 ▪ Computer Workstation with instrument control software
00-0349	GeneChip® System 3000Dx v.2 with Data Transfer Server*	Includes: <ul style="list-style-type: none"> ▪ GeneChip® Scanner 3000Dx V.2 with AutoLoaderDx ▪ Fluidics Station 450Dx v.2 ▪ Workstation with Affymetrix Molecular Diagnostics Software (AMDS) ▪ Data Transfer Server * Requires GeneChip® Hybridization Oven 645 (see below)
00-0331	GeneChip® Hybridization Oven 645	

For other instrument system configurations or individual system components to meet your needs, please contact your local Affymetrix account manager for assistance.

CytoScan® 750K Array Kit and Reagent Kit Bundle and CytoScan® 750K Training Kit are available outside US/Canada only.

Affymetrix, Inc. Tel: +1-888-362-2447 ▪ Affymetrix UK Ltd. Tel: +44-(0)-1628-552550 ▪ Affymetrix Japan K.K. Tel: +81-(0)3-6430-4020
 Panomics Solutions Tel: +1-877-726-6642 panomics.affymetrix.com ▪ USB Products Tel: +1-800-321-9322 usb.affymetrix.com

www.affymetrix.com Please visit our website for international distributor contact information.

“For Research Use Only. Not for use in diagnostic procedures.”

P/N CL01027 Rev. 2

©Affymetrix, Inc. All rights reserved. Affymetrix®, Axiom®, Command Console®, CytoScan®, DMET™, GeneAtlas®, GeneChip®, GeneChip-compatible™, GeneTitan®, Genotyping Console™, myDesign™, NetAffx®, OncoScan™, Powered by Affymetrix™, PrimeView®, Procarta®, and QuantiGene® are trademarks or registered trademarks of Affymetrix, Inc. All other trademarks are the property of their respective owners.

Products may be covered by one or more of the following patents: U.S. Patent Nos. 5,445,934; 5,744,305; 5,945,334; 6,140,044; 6,399,365; 6,420,169; 6,551,817; 6,733,977; 7,629,164; 7,790,389 and D430,024 and other U.S. or foreign patents. Products are manufactured and sold under license from OGT under 5,700,637 and 6,054,270.