


CytoScan™ Optima Array

Catalog Number 902507

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 **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.

Product use

Approximately 60-70% of first trimester miscarriages are caused by chromosomal abnormalities including aneuploidies, triploidy, uniparental disomy (UPD), and so forth. Traditional cytogenetic analysis of these samples is frequently challenging due to high rates of culture failure and maternal contamination, increasing the turn-around time for the results.

The CytoScan™ Optima Suite has been designed with feedback from Cytogeneticists worldwide and empirically optimized from the CytoScan™ HD Suite. The Applied Biosystems™ CytoScan™ Optima Array has whole-genome coverage and increased coverage targeting more than 400 regions relevant for prenatal research applications.

The CytoScan™ Optima Suite enables the detection of aneuploidies, submicroscopic aberrations, and mosaic events. Also, due to the ability to provide genotype information, it can help in the identification of maternal contamination, triploidies, and copy neutral events such as absence of heterozygosity and UPD.

Instrumentation and software required

- GeneChip™ Scanner 3000 7G
- GeneChip™ Fluidics Station 450
- GeneChip™ Hybridization Oven 645
- GeneChip™ Command Console™ (GCC) software
- Chromosome Analysis Suite (ChAS) software, version 3.3 or later

Instructions for use

See the *CytoScan™ Optima Assay User Guide* (Pub. No. 703280) for procedures on DNA target preparation, target hybridization, fluidics setup, array scanning, and data analysis instructions.

Fluidics scripts

The fluidics script used depends on the array type, labeling protocol, and reagents used for cartridge processing. Refer to the GeneChip Fluidics Station Scripts support page to determine which fluidics script is appropriate for your application. The fluidics scripts can be downloaded from our website.

Library files

Library files contain information about the probe array design characteristics, probe use and content, and scanning and analysis parameters. These files are unique for each probe array. Additional information can be located under the specific array product on our website.

Critical specifications

Item	Specification
Array format	400
Feature size	5 µm
Hybridization volume	100 µL. The total fill volume of the cartridge is 109 µL.
Fluidics protocol	CytoScan_Optima_Array_450
Library files	CytoScanOptima_Array.cdf

Ordering information

Product	Description	Source
CytoScan™ Optima Kit	Arrays and reagents sufficient for 24 reactions.	902533
CytoScan™ Optima Training Kit	Arrays and reagents sufficient for 24 reactions plus training materials.	902534

Storage, handling, and stability

This cartridge array consists of a square glass substrate mounted in a plastic cartridge. The glass contains an array of oligonucleotides that, when mounted, is on the inner glass surface. A chamber in the plastic housing directly under the glass acts as a reservoir where hybridization and washing occur.

Although the inner glass surface of the probe array is protected, any contamination or scratches on the outer surface of the glass can compromise the accuracy of the scan. Avoid touching the surface of the glass with your fingers. Skin oils and other substances, such as lotions or ink, can fluoresce. If the surface of

the glass is noticeably dirty, it can be carefully cleaned with a nonabrasive laboratory tissue.

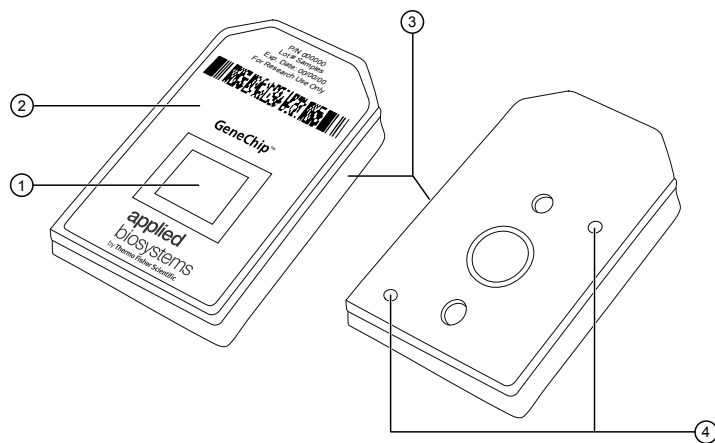


Figure 1 Cartridge array.

- ① Probes on a glass substrate
- ② Plastic cartridge
- ③ Notch
- ④ Septa

The cartridge array should be stored at 2–8°C. Refer to the expiration date on the package label. Do not use arrays or reagents after the expiration date.

Symbol table

The following table shows a legend of the graphic symbols that are used for product label, product information sheets, and user guides.

Symbol/Letters	Statement
	CATALOG NUMBER
	BATCH CODE
	USE BY YYYY-MM-DD
	TEMPERATURE LIMIT
	CONTAINS SUFFICIENT FOR <n> TESTS
	CONSULT INSTRUCTIONS FOR USE
	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.



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Revision history: Pub. No. MAN0017717

Revision	Date	Description
A.0	22 August 2018	Initial release in Thermo Fisher Scientific document control system. Supersedes legacy Affymetrix publication number 703254. Updated to the current document template, with associated updates to trademarks, logos, licensing, and warranty.

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