

# CytoScan™ Optima Reagent Kit

Catalog Number 902532

Pub. No. 703253 Rev. 3

**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](http://thermofisher.com/support).

## Introduction

Approximately 60-70% of first trimester miscarriages are caused by chromosomal abnormalities including aneuploidies, triploidy, uniparental disomy (UPD), and so on. 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 Applied Biosystems™ CytoScan™ Optima Suite has been designed with the feedback from Cytogeneticists worldwide and empirically optimized from the CytoScan™ HD Suite. The 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.

## 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.

## Storage, handling, and stability

The reagents that are contained in the CytoScan™ Optima Reagent Kit are shipped at different temperatures and must be stored at the recommended conditions.

The following must be stored at -25°C to -15°C (do not store at -80°C):

- The CytoScan™ Optima Module 1: Pre-Lab Restriction, Ligation, and Amplification as well as the CytoScan™ Optima Module 3: Main Lab Fragmentation, Labeling, and Hybridization

The following must be stored at 2°C to 8°C:

- CytoScan™ Optima Module 2: Pre-Lab TE Buffer and Water
- CytoScan™ Optima Module 4: Main Lab Stain, Holding Buffer, Beads, and Water

The following must be stored at 15°C to 30°C:

- CytoScan™ Optima Module 5: Main Lab Elution Buffer, and Purification Wash Buffer
- Wash Buffer A
- Wash Buffer B

Minimize repeated exposure to temperatures >0°C for the temperature sensitive elements. See the expiration date on the package label. Do not use reagent components after the expiration date.

**IMPORTANT!** The reagent kits are separated into modules to support the recommended workflow and minimize the chance of contamination during use. Store the unopened kits and modules in rooms appropriate to the workflow.

## Kit components

Component	Part No.	Storage temperature
CytoScan™ Optima Module 1: Pre-Lab Restriction, Ligation, and Amplification <ul style="list-style-type: none"> <li>• Nsp I</li> <li>• Nsp I Buffer</li> <li>• 100X BSA</li> <li>• DNA Ligase</li> <li>• DNA Ligase Bfr</li> <li>• CytoScan™ Taq Buffer</li> <li>• CytoScan™ Taq DNA Polymerase</li> <li>• dNTP</li> <li>• 5M Betaine</li> <li>• Adaptor, Nsp I</li> <li>• PCR Primer</li> </ul>	902527 <ul style="list-style-type: none"> <li>• 902421</li> <li>• 902422</li> <li>• 902423</li> <li>• 902379</li> <li>• 902378</li> <li>• 902582</li> <li>• 902581</li> <li>• 902401</li> <li>• 902402</li> <li>• 902426</li> <li>• 902427</li> </ul>	-25°C to -15°C
CytoScan™ Optima Module 2: Pre-Lab TE Buffer and Water <ul style="list-style-type: none"> <li>• Low EDTA TE Buffer</li> <li>• Water, Nuclease free</li> </ul>	902528 <ul style="list-style-type: none"> <li>• 902424</li> <li>• 902425</li> </ul>	2°C to 8°C
CytoScan™ Optima Module 3: Main Lab Fragmentation, Labeling, and Hybridization <ul style="list-style-type: none"> <li>• Fragmentation Reagent</li> <li>• Fragmentation Buffer</li> <li>• TdT Enzyme</li> <li>• TdT Buffer</li> <li>• DNA Labeling Reagent</li> <li>• Oligo Control Reagent</li> <li>• Hyb Buffer Part 1</li> <li>• Hyb Buffer Part 2</li> <li>• Hyb Buffer Part 3</li> <li>• Hyb Buffer Part 4</li> </ul>	902529 <ul style="list-style-type: none"> <li>• 902428</li> <li>• 902301</li> <li>• 902429</li> <li>• 902430</li> <li>• 902431</li> <li>• 902432</li> <li>• 902433</li> <li>• 902434</li> <li>• 902435</li> <li>• 902436</li> </ul>	-25°C to -15°C
CytoScan™ Optima Module 4: Main Lab Stain, Holding Buffer, Beads, and Water <ul style="list-style-type: none"> <li>• Stain Buffer 1</li> <li>• Stain Buffer 2</li> <li>• Array Holding Buffer</li> <li>• Purification Beads</li> <li>• Water, Nuclease free</li> </ul>	902530 <ul style="list-style-type: none"> <li>• 902440</li> <li>• 902441</li> <li>• 902442</li> <li>• 902443</li> <li>• 902425</li> </ul>	2°C to 8°C
CytoScan™ Optima Module 5: Main Lab Elution Buffer and Purification Wash Buffer <ul style="list-style-type: none"> <li>• Elution Buffer</li> <li>• Purification Wash Buffer</li> </ul>	902531 <ul style="list-style-type: none"> <li>• 902444</li> <li>• 902437</li> </ul>	15°C to 30°C
Wash A	902438	15°C to 30°C
Wash B	902439	

## Ordering information








Unless otherwise indicated, all materials are available through [thermofisher.com](http://thermofisher.com).

MLS: Fisher Scientific ([fisherscientific.com](http://fisherscientific.com)) or other major laboratory supplier.

Cat. No.	Component	Description
902533	CytoScan™ Optima Kit	Arrays and reagents sufficient for 24 reactions.
902534	CytoScan™ Optima Training Kit	Arrays and reagents sufficient for 24 reactions, plus training materials.

## 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 LIMITATION
	CONTAINS SUFFICIENT FOR <n> TESTS
	CONSULT INSTRUCTIONS FOR USE
	MANUFACTURER

## Customer and technical support

Visit [thermofisher.com/support](http://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](http://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](http://www.thermofisher.com/support).



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**Revision history:** Pub. No. 703253

Revision	Date	Description
3	06 September 2017	Update document to current template.
2	23 August 2016	Baseline for revision history.

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