

PharmacoScan™ Assay 96-Array Format

SITE PREPARATION GUIDE

Manual Protocol

Publication Number 703460

Revision 1

The information in this guide is subject to change without notice.

DISCLAIMER

TO THE EXTENT ALLOWED BY LAW, LIFE TECHNOLOGIES AND/OR ITS AFFILIATE(S) WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE, MULTIPLE, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING FROM THIS DOCUMENT, INCLUDING YOUR USE OF IT.

Important Licensing Information

This product may be covered by one or more Limited Use Label Licenses. By use of this product, you accept the terms and conditions of all applicable Limited Use Label Licenses.

Corporate entity

Life Technologies | Carlsbad, CA 92008 USA | Toll Free in USA 1 800 955 6288

TRADEMARKS

All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified.

UV-Star is a registered trademarks of GREINER BIO-ONE. Eppendorf and Mastercycler are registered trademarks of Eppendorf AG. Bio-Rad and Hard-Shell are registered trademarks of Bio-Rad Laboratories, Inc. Microsoft, and Excel are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Jitterbug is a trademark of Boekel Scientific Allegra is a registered trademark of Beckman Coulter, Inc. Pipet-Lite is a trademark of Rainin Instrument, LLC. Vortex-Genie is a registered trademark of Scientific Industries, Inc. SpectraMax is a registered trademark of Molecular Devices Corporation.

©2017 Thermo Fisher Scientific Inc. All rights reserved.

Contents

■ CHAPTER 1 Equipment and supplies required	4
Equipment, software, reagents and arrays required	4
Equipment required for manual target preparation	6
Pre-amplification area/amplification staging area	6
Oven requirements	7
Spectrophotometer	8
Thermal cycler recommendations and protocols	8
Thermal Cycler Consumables	10
Plate shaker recommendations	10
Plate centrifuge	11
Sample plates	12
Pipettes and tips	12
Other labware required	13
Other reagents and gels required	13
Other lab equipment required	14
■ APPENDIX A Supplier contact list.	15
Documentation and support	16
Related documentation	16
Customer and technical support	17



Equipment and supplies required

This site preparation guide includes the supplier and part number information for the equipment, software, reagents, arrays, labware and other consumables that have been validated for use with the PharmacoScan™ Assay 96-Array Format Manual Protocol.

Information on suppliers of the equipment and supplies is listed in [Appendix A, "Supplier contact list" on page 15](#). For a list of related documentation, please refer to ["Documentation and support" on page 16](#).

Equipment, software, reagents and arrays required

Table 1 Equipment, software, reagents and arrays required

✓	Item	Cat. No.
Equipment		
<input type="checkbox"/>	GeneTitan™ Multi-Channel Instrument ¹	Contact Thermo Fisher Scientific
Software		
<input type="checkbox"/>	GeneChip™ Command Console™ (AGCC)	version 4.3 or later
<input type="checkbox"/>	Axiom™ Analysis Suite	version 3.0 or later
Reagents		
<input type="checkbox"/>	PharmacoScan™ Reagent Kit 96 Reactions (1 required) PharmacoScan Reagent Kit 96 Reactions contains the following modules for processing one 96-array format plate: <ul style="list-style-type: none"> • PharmacoScan Module A (qty 1) • PharmacoScan Module B (qty 1) • Module 1 (qty 1) • Module 2-1 (qty 1) • Module 2-2 (qty 1) • Module 3 (qty 1 set) <ul style="list-style-type: none"> – Wash Buffer A, 2 bottles – Wash Buffer B, 1 bottle – Water, 1 bottle • Module 4-1 (qty 1) • Module 4-2 (qty 1) 	913025 <ul style="list-style-type: none"> • 912896 • 912897 • 901711 • 901528 • 901529 – 901446 – 901447 – 901578 • 901278 • 901276

¹ For a complete list of all equipment and supplies required for GeneTitan Instrument installation and operation, please consult the *GeneTitan™ Multi-Channel Instrument Site Preparation Guide* (P/N 08-0305).

Table 1 Equipment, software, reagents and arrays required (Continued)

✓	Item	Cat. No.
Arrays		
<input type="checkbox"/>	PharmacoScan™ 96F Array Plates (1)	903160
PharmacoScan™ Array GeneTitan consumables		
<input type="checkbox"/>	Each Axiom™ GeneTitan™ Consumables Kit contains the following labware for each array plate: <ul style="list-style-type: none"> • 1 Hyb Tray • 1 Scan Tray with top cover and protective base • 5 Stain Trays with top covers These trays are required for processing PharmacoScan array plates on the GeneTitan™ Multi-Channel Instrument.	901606
PharmacoScan™ kits		
<input type="checkbox"/>	PharmacoScan™ Training 96F Kit for Manual Protocol Each Kit Includes: <ul style="list-style-type: none"> • PharmacoScan™ Reagent Kit 96 Reactions (enough to process 2 x 96F array plates) • Two PharmacoScan™ 96F Array Plates • Two Axiom™ GeneTitan™ Consumables Kits • Two PharmacoScan™ DNA Training Plates, for 96 format Assay 	913027
<input type="checkbox"/>	PharmacoScan™ Assay 96F Kit for Manual Protocol Each Kit Includes: <ul style="list-style-type: none"> • PharmacoScan™ Reagent Kit 96 Reactions • One PharmacoScan™ 96F Array Plate • One Axiom™ GeneTitan™ Consumables Kit 	903026

Equipment required for manual target preparation

Table 2 Additional Instruments Required for the PharmacoScan™ Assay 96-Array Format Manual Protocol

✓	Equipment	Manufacturer/ Distributor	Part Number
<input type="checkbox"/>	Two or three ovens (see " Oven requirements " on page 7)		
<input type="checkbox"/>	Fume hood (Strongly recommended: see the <i>PharmacoScan™ Assay 96-Array Format Manual Protocol User Guide</i> for more information)		
<input type="checkbox"/>	One of the following thermal cyclers: <ul style="list-style-type: none"> • Applied Biosystems 9700 • Applied Biosystems Veriti™ • Applied Biosystems ProFlex™ • Eppendorf Mastercycler™ pro S (see " Thermal cyclers recommendations and protocols " on page 8)	Thermo Fisher Scientific Thermo Fisher Scientific Thermo Fisher Scientific Eppendorf	
<input type="checkbox"/>	Plate shakers: (see " Plate shaker recommendations " on page 10)		

Pre-amplification area/amplification staging area

Precautions are required when manipulating genomic DNA or setting up amplification reactions to avoid contamination with foreign DNA amplified in other reactions and procedures. It is recommended that genomic DNA manipulations and amplification reaction set up are performed in a dedicated rooms or areas separate from the main laboratory.

These areas should have dedicated sets of pipettes and plasticware. If no dedicated area is available, use of a dedicated bench or a dedicated biosafety hood and dedicated pipettes is suggested. If no dedicated bench or biosafety hood is available, a set of dedicated pipettes is recommended.

Ideally, the pre-amplification and amplification staging areas would be separate; however these areas may be combined due to space and equipment limitations.

Oven requirements

Multiple ovens are required for manual target preparation. The exact number depends whether you are running only a single sample plate and array plate through the workflow, or if you are running the three plate/week manual target preparation workflow.

- If you are running individual plates, you will need two ovens for the workflow.
- If you are running the three plate/week workflow, a third oven is highly recommended.

Refer to Chapter 6, “Manual Target Preparation for Processing Three Axiom Array Plates per Week” in the *PharmacoScan 96-Array Format Manual Protocol User Guide* (Pub. No. 703459) for more information.

Table 3 Suggested settings for ovens when performing the three-plate workflow for manual target preparation

Day of workflow	Oven 1	Oven 2	Oven 3
Day 1	37°C	N/A	N/A
Day 2	37°C	65°C	37°C
Day 3	48°C ¹	65°C	37°C
Day 4	48°C ¹	65°C	37°C
Day 5	N/A	N/A	N/A

¹ For preheating of the 96-well metal chamber for hyb transfer.

Table 4 Ovens required for the PharmacoScan 96-Array Format Manual Protocol

✓	Equipment	Manufacturer	Cat. No.
<input type="checkbox"/>	Two ovens, any combination of the following types:		
	• ED 56 Drying and Heating Chamber ¹	BINDER	ED056UL-120V Voltage: 120 V 1~60 Hz P/N 9010-0334
			ED056-230V Voltage: 230 V 1~50/60 Hz P/N 9010-0333
	• Applied Biosystems™ GeneChip™ Hyb Oven 645 ²	Thermo Fisher Scientific	00-0331

¹ Replaces BINDER Model ED 53.

² The GeneChip™ Hybridization Oven 640 is currently not supported with the PharmacoScan 96-Array Format Manual Protocol.

Spectrophotometer We recommend using one of the spectrophotometers listed in [Table 5](#).

Table 5 Spectrophotometers

✓	Item	Supplier	Cat. No.
☐	One of the following spectrophotometers:		
	• DTX 880 Multimode Detector, with: – Genomic Filter Slide or • SpectraMax® High throughput Microplate Spectrophotometer	Beckman Coulter Beckman Coulter Molecular Devices	987921 – detector A30184 – filter slide Plus384

Thermal cycler recommendations and protocols

The following thermal cycler has been validated for the PharmacoScan Assay 96-Array Format Manual Protocol:

- Applied Biosystems 9700 (with gold-plated or silver block)
- Applied Biosystems Veriti
- Applied Biosystems ProFlex
- Eppendorf® Mastercycler® pro S

IMPORTANT! Always use the heated lid option when programming protocols. The **PharmacoScan mPCR** protocol was validated using the “9600 mode” on the Applied Biosystems 9700, Applied Biosystems Veriti, and Applied Biosystems ProFlex thermal cyclers. The “Safe” mode was used for the Eppendorf Mastercycler pro S. Refer to the manufacturer’s user guide for programming information.

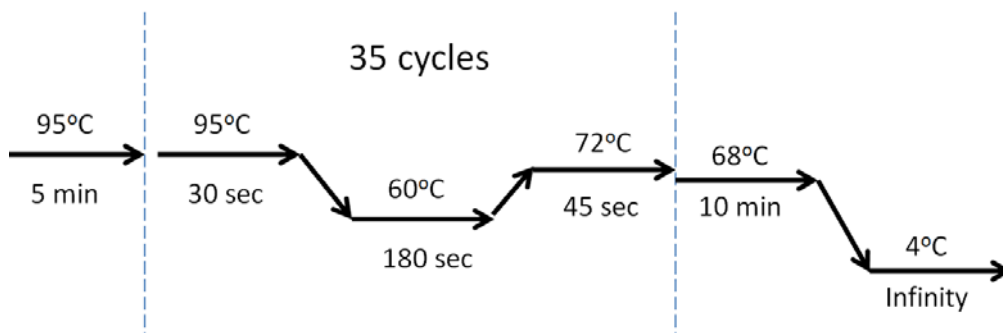


Figure 1 PharmacoScan mPCR thermal cycler protocol (Stage 1A)

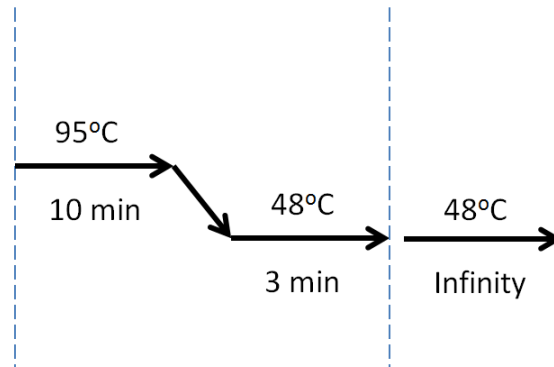



Figure 2 PharmacoScan Denature thermal cycler protocol (Stage 4)

 **WARNING!** Evaporation during denaturation can negatively impact assay performance. Use the recommended thermal cycler consumables and sealing film to eliminate condensation and evaporation.

PharmacoScan Assay 96-Array Format Manual Protocol has been validated with the Applied Biosystems 9700 (with gold-plated or silver block) Applied Biosystems Veriti, Applied Biosystems ProFlex, and Eppendorf Mastercycler pro S. Use of other thermal cyclers for this stage may result in assay failure and may violate the array and reagent replacement policy.

Note: Two thermal cyclers are required if running the three plate/week manual target preparation workflow.

Thermal Cycler Consumables

Table 6 provides details into the consumables to be used with each thermal cycler.

Table 6 Thermal Cycler Consumables for the PharmacoScan Assay 96-Array Format Manual Protocol

Thermal cycler model	PCR plate type	Seal ¹
Applied Biosystems 9700	• Bio-Rad Hard-Shell Full-Height 96-Well Semi-Skirted PCR Plate (P/N HSS-9641)	MicroAmp™ Clear Adhesive Film from Applied Biosystems (Cat. No. 4306311)
Applied Biosystems Veriti	• Bio-Rad Hard-Shell Full-Height 96-Well Semi-Skirted PCR Plate (P/N HSS-9641)	MicroAmp™ Clear Adhesive Film from Applied Biosystems (Cat. No. 4306311)
Applied Biosystems ProFlex	• Bio-Rad Hard-Shell Full-Height 96-Well Semi-Skirted PCR Plate (P/N HSS-9641)	MicroAmp™ Clear Adhesive Film from Applied Biosystems (Cat. No. 4306311)
Eppendorf Mastercycler pro S	• Bio-Rad Hard-Shell Low Profile 96-well Full-Skirt PCR Plate (P/N HSP-9631)	MicroAmp™ Clear Adhesive Film from Applied Biosystems (Cat. No. 4306311)

¹ Microseal 'B' film from Bio-Rad (P/N MSB-1001) may be used in place of MicroAmp Clear Adhesive Film for the Applied Biosystems thermal cycler.

Plate shaker recommendations

We recommend using one of the following shakers listed in Table 7.

Table 7 Shakers

Shaker	Supplier	Cat. No.
Thermo Scientific™ Compact Digital Microplate Shaker	Thermo Scientific	88880023
Jitterbug™	Boekel Scientific	Model 130 000

Plate centrifuge

One plate centrifuge is required for the PharmacoScan Assay 96-Array Format Manual Protocol. We recommend the plate centrifuges listed in Table 8. When centrifuging and drying pellets, the centrifuge must be able to spin down plates at:

- rcf: 3200 xg with an appropriate rotor - bucket combination (4000 RPM for the Eppendorf 5810R configuration described below)
- Temperature: 4°C

In addition, the bottom of the rotor buckets should be soft rubber to ensure that the deep well plates do not crack. Do not use buckets where the plates sit directly on a metal or hard plastic bottom. For the Eppendorf 5810R, do not use the A-4-62 rotor with a WO-15 plate carrier (hard bottom).

Table 8 Plate centrifuges recommended for the PharmacoScan Assay 96-Array Format Manual Protocol

✓	Item	Supplier	Cat. No.
☐	One of the following centrifuges:		
	<ul style="list-style-type: none"> • Allegra® 25R Refrigerated Benchtop Centrifuge 	Beckman Coulter	369434 (60 Hz, 280 V) 369435 (50/60 Hz, 200 V) 369436 (50 Hz, 230 V) 368954 S5700 Microplate rotor
	<ul style="list-style-type: none"> • Centrifuge 5810R (refrigerated) – A-4-81 MTP/Flex swinging bucket rotor with 4 microtest-plate buckets 	Eppendorf	022625501 (60 Hz, 120 V) 022625101 (50 Hz, 120 V, 20 AMP version) 022625551 (50 Hz, 230 V) 022638807
	<ul style="list-style-type: none"> • Sorvall™ Legend™ XTR (refrigerated), with: – TX-750 high visibility swinging rotor bucket – Carrier for microplates (including plate trays and neoprene pads) 	Thermo Scientific	75004521 (60 Hz, 120 V) 75004520 (50 Hz, 230 V) 75004523 (50/60 Hz, 230 V USA and Canada) 75003607 One of either: <ul style="list-style-type: none"> • Set of two carriers (75003795) • Set of four carriers (75003617)

Relative centrifugal force (*rcf*) can be calculated as follows:

$$rcf = (1.118 \times 10^{-5}) R S^2$$

where R is the radius of the rotor in centimeters, and S is the speed of the centrifuge in revolutions per minute.

Sample plates

Table 9 Sample plates required for PharmacoScan Assay 96-Array Format Manual Protocol

✓	Plate description	Manufacturer/ Distributor	Cat. No.
<input type="checkbox"/>	One of the following PCR Plates: <ul style="list-style-type: none"> • Bio-Rad Hard-Shell Full-Height 96-Well Semi-Skirted PCR Plate (if using Applied Biosystems 9700, Applied Biosystems Veriti, Applied Biosystems ProFlex thermal cyclers) • Bio-Rad Hard-Shell Low Profile 96-well Full-Skirt PCR Plate (if using Eppendorf Master pro S thermal cycler) 	Bio-Rad Bio-Rad	HSS-9641 HSP-9631
<input type="checkbox"/>	ABgene™ 96 Square Well Storage Plate Mark II, 2.2 mL	Thermo Scientific	AB-0932
<input type="checkbox"/>	Greiner Bio-One 96-well UV-Star Plates, 370 µL/well	E&K Scientific VWR, Sigma-Aldrich	25801 655801

Pipettes and tips

Pipettes and tips recommended for PharmacoScan target preparation are listed in [Table 10](#).

Table 10 Recommended pipettes and tips for PharmacoScan Assay 96-Array Format Manual Protocol

✓	Equipment	Manufacturer /Distributor	Cat. No.
<input type="checkbox"/>	Pipet-Lite™, Magnetic-Assist single channel P20	Rainin	L-20
<input type="checkbox"/>	Pipet-Lite™, Magnetic-Assist single channel P200	Rainin	L-200
<input type="checkbox"/>	Pipet-Lite™, Magnetic-Assist single channel P1000	Rainin	L-1000
<input type="checkbox"/>	Pipette, 12-channel P20	Rainin	L12-20
<input type="checkbox"/>	Pipette, 12-channel P50 (optional)	Rainin	L12-50
<input type="checkbox"/>	Pipette, 12-channel P200	Rainin	L12-200
<input type="checkbox"/>	Pipette, 12-channel P1200	Rainin	L12-1200
<input type="checkbox"/>	Pipette tips GP = refill	Rainin	GP-L10F
<input type="checkbox"/>	Pipette tips GP = refill	Rainin	GP-L200F
<input type="checkbox"/>	Pipette tips GP = refill	Rainin	GP-L1000F
<input type="checkbox"/>	Pipette tips RT = with rack	Rainin	RT-L10F
<input type="checkbox"/>	Pipette tips RT = with rack	Rainin	RT-L200F
<input type="checkbox"/>	Pipette tips RT = with rack	Rainin	RT-L1000F

Other labware
required

Table 11 Other labware required for the PharmacoScan Assay 96-Array Format Manual Protocol

✓	Item	Manufacturer/ Distributor	Cat. No.
<input type="checkbox"/>	Microcentrifuge tubes and tube holder	various	various
<input type="checkbox"/>	50 mL conical centrifuge tube, polypropylene, sterile	various	various
<input type="checkbox"/>	15 mL conical centrifuge tube, polypropylene, sterile	various	various
<input type="checkbox"/>	Tube Holder, 15 and 50 mL	various	various
<input type="checkbox"/>	96-well PCR Plate Rack	various	various
<input type="checkbox"/>	Matrix™ 25 mL reservoir	Thermo Fisher Scientific	8093-11
<input type="checkbox"/>	Solution Basin, 100 mL sterile, multichannel	VWR	89092-836
<input type="checkbox"/>	96 well plate metal chamber	Diversified Biotech	CHAM-1000
<input type="checkbox"/>	Serological Pipettes (10 mL)	VWR	89130-898
<input type="checkbox"/>	Serological Pipettes (5 mL)	VWR	89130-896
<input type="checkbox"/>	Adhesive film for 96-well plates – use one of the following: • MicroAmp™ Clear Adhesive Film • Microseal 'B' Film	Thermo Fisher Scientific Bio-Rad	4306311 MSB1001
<input type="checkbox"/>	Kimwipes®	Your choice	—

Other reagents and
gels required

Table 12 Other reagents required

✓	Item	Supplier	Cat. No.
<input type="checkbox"/>	QIAGEN Multiplex PCR <i>Plus</i> Kit (100)	QIAGEN	206152
<input type="checkbox"/>	Quant-iT PicoGreen dsDNA Assay Kit (recommended for DNA quantitation)	Thermo Fisher Scientific	P7589
<input type="checkbox"/>	Reduced EDTA TE Buffer (10 mM Tris-HCl pH 8.0, 0.1 mM EDTA)	Thermo Fisher Scientific	75793
<input type="checkbox"/>	2-Propanol, anhydrous, 99.5% (Isopropanol)	Sigma-Aldrich	278475

Table 13 Reagents and gels required to run QC steps

✓	Item	Supplier	Cat. No.
<input type="checkbox"/>	Mother E-Base™ Device	Thermo Fisher Scientific	EB-M03
<input type="checkbox"/>	Daughter E-Base™ Device		EB-D03
<input type="checkbox"/>	E-Gel® 48 4% agarose gels (for Sample QC)		G8008-04
<input type="checkbox"/>	TrackIt™ 25 bp DNA Ladder (for Sample QC)		10488-022
<input type="checkbox"/>	TrackIt™ Cyan/Orange Loading Buffer (for Sample QC)		10482-028
<input type="checkbox"/>	E-Gel® 48 1% agarose gels (for gDNA QC)		G8008-01
<input type="checkbox"/>	RediLoad™ (for gDNA QC)		750026
<input type="checkbox"/>	E-Gel® 96 High Range DNA Marker (for gDNA QC)		12352-019
<input type="checkbox"/>	E-Gel® 48 2% agarose gels (optional mPCR QC)		G8008-02
<input type="checkbox"/>	Water, nuclease-free, ultrapure MB grade		71786
<input type="checkbox"/>	50 bp DNA ladder (optional mPCR QC)	New England BioLabs Inc.	N3236S

Other lab equipment required The remaining equipment required is listed in [Table 14](#).

Table 14 Other equipment required

✓	Item	Supplier	Cat. No.
<input type="checkbox"/>	Freezer, -20°C	Any vendor	—
<input type="checkbox"/>	Refrigerator, 2 to 8°C	Any vendor	—
<input type="checkbox"/>	Vortex-Genie® (for plates and microtubes) ¹	Scientific Industries	SI-0236 (120 V/60 Hz) SI-0246 (230 V/50 Hz)
<input type="checkbox"/>	Mini Microcentrifuge, for 2 mL tubes	VWR	93000-196 (120V) 93000-196 (230V)
<input type="checkbox"/>	Bel-Art Cryo-Safe Mini Cooler, -15°C ¹	VWR	47751-730
<input type="checkbox"/>	Ice bucket, 4 to 9 liters	Any vendor	—
<input type="checkbox"/>	Markers, permanent, fine point	Your choice	—
<input type="checkbox"/>	Pipet aid ¹	VWR	53106-220
<input type="checkbox"/>	Zerostat Anti-static Gun	Thermo Fisher Scientific	74-0014

¹ Equivalent items from other manufacturers are acceptable.



Supplier contact list

Table 15 Supplier contact list

Supplier	Website Address
Beckman Coulter	www.beckmancoulter.com
Bio-Rad	www.bio-rad.com
E&K Scientific	www.eandkscientific.com
Eppendorf	www.eppendorf.com
New England BioLabs Inc.	www.neb.com
QIAGEN	www.qiagen.com
Rainin	www.shoprainin.com
Scientific Industries	www.scientificindustries.com
Sigma-Aldrich	www.sigmaaldrich.com
Thermo Fisher Scientific (Thermo Scientific, Applied Biosystems, Invitrogen, Fisher Scientific)	www.thermofisher.com
VWR	https://us.vwr.com/store/

Documentation and support

Related documentation

Table 16

Document	Publication number	Description
<i>PharmacoScan™ Assay 96-Array Format Manual Protocol Site Preparation Guide</i>	703460	Provides guidance on reagents, instruments, and supplies required to run the PharmacoScan Assay 96-Array Format Manual Protocol.
<i>PharmacoScan™ Assay 96-Array Format Manual Protocol Quick Reference</i>	703461	An abbreviated reference for the target preparation step of the PharmacoScan Assay 96-Array Format Manual Protocol. This quick reference document is intended for experienced users.
<i>PharmacoScan™ Assay 24-Array Format Manual Protocol User Guide</i>	703286	This user guide provides comprehensive instructions on running the PharmacoScan Assay 24-Array Format Manual Protocol.
<i>PharmacoScan™ Assay 24-Array Format Manual Protocol Site Preparation Guide</i>	703287	Provides guidance on reagents, instruments, and supplies required to run the PharmacoScan Assay 24-Array Format Manual Protocol.
<i>PharmacoScan™ Assay 24-Array Format Manual Protocol Quick Reference</i>	703288	An abbreviated reference for the target preparation step of the PharmacoScan Assay 24-Array Format Manual Protocol. This quick reference document is intended for experienced users.
<i>Axiom™ Genotyping Solution Data Analysis Guide</i>	702961	This guide provides information and instructions for analyzing Axiom genotyping array data. It includes the use of Axiom™ Analysis Suite, Power Tools (APT) and SNPolisher R package to perform quality control analysis (QC) for samples and plates, SNP filtering prior to downstream analysis, and advanced genotyping methods.
<i>GeneTitan™ MC Protocol for Axiom 2.0 Array Plate Processing Quick Reference</i>	702988	A quick reference document for experienced GeneTitan users processing Axiom array plates.
<i>GeneTitan™ Multi-Channel Instrument User Guide</i>	08-0308	The GeneTitan Multi-Channel (MC) Instrument automates array processing from target hybridization to data generation by combining a hybridization oven, fluidics processing, and state-of-the art imaging device into a single bench-top instrument. This document detailing the use, care, and maintenance for the GeneTitan MC Instrument.

Table 16

Document	Publication number	Description
<i>GeneTitan™ Multi-Channel Instrument Site Preparation Guide</i>	08-0305	Provides guidance on creating and maintaining the proper environment required for the GeneTitan Multi-Channel Instrument.
Analysis and software		
<i>Axiom™ Genotyping Solution Data Analysis Guide</i>	702961	This guide provides information and instructions for analyzing Axiom genotyping array data. It includes the use of Axiom™ Analysis Suite, Power Tools (APT) and SNPolisher R package to perform quality control analysis (QC) for samples and plates, SNP filtering prior to downstream analysis, and advanced genotyping methods.
<i>Applied Biosystems™ GeneChip™ Command Console™ Software User Guide</i>	702569	This user guide provides instructions on using Applied Biosystems GeneChip Command Console Software (AGCC) used to control GeneChip instrument systems. Command Console Software provides an intuitive set of tools for instrument control and data management used in the processing of GeneChip Arrays.
<i>Axiom™ Analysis Suite 3.0 User Guide</i>	703307	This user guide provides instructions on using Axiom™ Analysis Suite—a single-source software package to enable complete genotyping analysis of all Axiom arrays.

Customer and technical support

Visit thermofisher.com/support for the latest in services and support, including:

- Worldwide contact telephone numbers
- Product support, including:
 - Product FAQs
 - Software, patches, and updates
- 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.

For support visit thermofisher.com/support or email techsupport@lifetech.com
thermofisher.com

20 March 2017

ThermoFisher
S C I E N T I F I C