

Ion ReproSeq™ PGS Kits

Catalog Numbers A28888, A28889, A28890, A29142, A29143, A29144

Pub. No. MAN0014062 **Rev.** C.0

Note: For safety and biohazard guidelines, refer to the “Safety” appendix in the *Ion ReproSeq™ PGS Kits User Guide* (Pub. no. MAN013762). Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Description

The Ion ReproSeq™ PGS Kits are bundles of four (without chips) or five (with chips) sub-kits which provide reagents and materials for whole genome amplification, library preparation, template preparation and sequencing. Use the kits in conjunction with the Ion PGM™ System to detect chromosomal aneuploidies and copy number variations starting from a single cell. Kit components are:

- Ion SingleSeq Kit (1, 5 or 8 boxes per Ion ReproSeq™ PGS Kit, depending on the kit)

- Ion PGM™ Template IA 500 Kit (4 boxes/set, 1 set per Ion ReproSeq™ PGS Kit)
- Ion PGM™ Hi-Q™ Sequencing Kit (4 boxes/set, 1 set per Ion ReproSeq™ PGS Kit)
- Ion PGM™ Wash 2 Bottle Kit (1 box per Ion ReproSeq™ PGS Kit)
- Ion 314™, Ion 316™, or Ion 318™ Chip Kit v2 BC (8 pack; **Cat. nos. A28888, A28889, A28890 only**)

The Ion SingleSeq Kit provides 24 unique Barcode Adapters and reagents to prepare 24 barcoded SingleSeq libraries. The Ion PGM™ Template IA 500 Kit provides reagents and supplies to perform 4 isothermal amplification reactions. The Ion PGM™ Hi-Q™ Sequencing Kit and Ion PGM™ Wash 2 Bottle Kit provide reagents and materials to perform 4 initializations and up to 12 sequencing runs on the Ion PGM™ Sequencer. Store the kit components as directed. Refer to the *Ion ReproSeq™ PGS Kits User Guide* (Pub. no. MAN0013762) for more information.

Ion ReproSeq™ PGS Kits

Ion ReproSeq™ PGS Kit configurations

Ion ReproSeq™ PGS Kit	Cat. no.	Ion Chip Kit included	Number of Ion SingleSeq Kits provided per Ion ReproSeq™ PGS Kit ^[1]
Ion ReproSeq™ PGS 314 Kit, with chips	A28888	Ion 314™ Chip Kit v2 BC	1
Ion ReproSeq™ PGS 316 Kit, with chips	A28889	Ion 316™ Chip Kit v2 BC	5
Ion ReproSeq™ PGS 318 Kit, with chips	A28890	Ion 318™ Chip Kit v2 BC	8
Ion ReproSeq™ PGS 314 Kit, without chips	A29142	—	1
Ion ReproSeq™ PGS 316 Kit, without chips	A29143	—	5
Ion ReproSeq™ PGS 318 Kit, without chips	A29144	—	8

^[1] All other components provided at 1 box per Ion ReproSeq™ PGS Kit.

Kit contents

Ion SingleSeq Kit (Part no. A28955)

Component	Cap color	Quantity	Volume	Storage
Cell Extraction Buffer	Green	1 tube	120 µL	-30°C to -10°C
Extraction Enzyme Dilution Buffer	Violet	1 tube	115.2 µL	
Cell Extraction Enzyme	Yellow	1 tube	4.8 µL	
Pre-Amplification Buffer	Red	1 tube	115.2 µL	
Pre-Amplification Enzyme	White	1 tube	4.8 µL	
Amplification Buffer	Orange	1 tube	648 µL	
Amplification Enzyme	Blue	1 tube	12 µL	
Nuclease-free Water	Clear	1 tube	108 µL	
Human CEPH Genomic DNA Control, 100 µg/mL	Red	1 tube	30 µL	
Barcode Plate (containing Ion SingleSeq Barcode Set 1)	—	1 plate	5 µL/well	

Ion PGM™ Template IA 500 Kit (Cat. no. A24622)

Component	Cap color	Quantity	Volume	Storage
Ion PGM™ Template IA Supplies 500 (Part no. A24618)				
Ion OneTouch™ ES Supplies	—	1 bag	—	15°C to 30°C
Ion PGM™ Template IA Reagents 500 (Part no. A24619)				
Ion PGM™ Template IA Pellets 500	—	4 foil pouches ^[1]	—	4°C to 8°C
Ion PGM™ Template IA ISP Dilution Buffer	White	1 tube	1 mL	
Ion PGM™ Template IA Start Solution	White	2 tubes	1200 µL each	
Ion PGM™ Template IA Reactions 500 (Part no. A24620)				
Ion PGM™ Template IA Ion Sphere™ Particles	Black	1 tube	86 µL	-30°C to -10°C
Ion PGM™ Template IA Primer Mix S	Black	1 tube	48 µL	
Ion PGM™ Template IA Primer Mix L ^[2]	White	1 tube	48 µL	
Ion PGM™ Template IA Rehydration Buffer	White	2 tubes	1.5 mL each	
Ion PGM™ Template IA Solutions 500 (Part no. A24621)				
Ion PGM™ Template IA Stop Solution	—	1 tube	2.8 mL	15°C to 30°C
Ion PGM™ Template IA Recovery Solution	—	1 tube	7 mL	
Ion PGM™ Template IA Wash Solution	—	1 tube	4 mL	
MyOne™ Beads Wash Solution	Green	1 tube	1.04 mL	
Neutralization Solution	Red	1 tube	40 µL	
Tween™ Solution	—	1 tube	3.5 mL	

^[1] 1 Ion PGM™ Template IA Pellet 500 per tube per pouch

^[2] Primer Mix L is intended for amplification of long templates and is not used with the Ion ReproSeq™ PGS Kit.

Ion PGM™ Hi-Q™ Sequencing Kit (Cat. no. A25592)

Component	Cap or label color	Quantity	Volume	Storage
Ion PGM™ Sequencing Supplies (Part no. A25587)				
Wash 1 Bottle w/ label (250 mL)	Green	1 bottle	—	15°C to 30°C
Wash 3 Bottle w/ label (250 mL)	Green	1 bottle	—	
Ion PGM™ Reagent Bottle Sipper Tubes	Blue	16 tubes	—	
Ion PGM™ Wash Bottle Sipper Tubes	Gray	8 tubes for 250-mL bottles 4 tubes for 2-L bottles	—	
Reagent Bottles w/ labels (50 mL)	—	25 bottles	—	
Ion PGM™ Hi-Q™ Sequencing Reagents (Part no. A25588)				
Ion PGM™ Hi-Q™ Sequencing Polymerase	Yellow	1 tube	36 µL	-30°C to -10°C
Sequencing Primer	White	1 tube	144 µL	
Control Ion Sphere™ Particles	Clear	1 tube	60 µL	
Ion PGM™ Hi-Q™ Sequencing Solutions (Part no. A25589)				
Ion PGM™ Hi-Q™ Sequencing W2 Solution	Black	4 bottles	126.25 mL	2°C to 8°C (store W2 Solution protected from light)
Ion PGM™ Cleaning Tablet	—	4 tablets	—	
Annealing Buffer	—	1 bottle	12 mL	
Ion PGM™ Sequencing W3 Solution	—	2 bottles	100 mL each	
Ion PGM™ Hi-Q™ Sequencing dNTPs (Part no. A25590)				
Ion PGM™ Hi-Q™ Sequencing dGTP	Black	1 tube	80 µL	-30°C to -10°C
Ion PGM™ Hi-Q™ Sequencing dCTP	Blue	1 tube	80 µL	
Ion PGM™ Hi-Q™ Sequencing dATP	Green	1 tube	80 µL	
Ion PGM™ Hi-Q™ Sequencing dTTP	Red	1 tube	80 µL	

Ion PGM™ Wash 2 Bottle Kit (Cat. no. A25591)

Component	Quantity	Volume	Storage
Wash 2 Bottle w/ label (2 L)	1 bottle	—	15°C to 30°C
Wash 2 Bottle Conditioning Solution	1 bottle	125 mL	

Ion Chip Kit

Ion Chip Kit	Included with Ion ReproSeq™ PGS Kit	Storage
Ion 314™ Chip Kit v2 BC (8 pack; Cat. no. 4488144)	Ion ReproSeq™ PGS 314 Kit, with chips	15°C to 30°C
Ion 316™ Chip Kit v2 BC (8 pack; Cat. no. 4488149)	Ion ReproSeq™ PGS 316 Kit, with chips	
Ion 318™ Chip Kit v2 BC (8 pack; Cat. no. 4488150)	Ion ReproSeq™ PGS 318 Kit, with chips	

Precautions

Handle biological samples and all other materials according to local laboratory guidelines and regulations. Avoid cross-contamination of samples and reagents to ensure quality results.

If equipment or reagents are used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

IMPORTANT! Do not substitute components in this kit with components from other Ion Torrent™ library, template, or sequencing kits. This protocol has been verified using these specific materials. Substitution may adversely affect system performance.

Note: Refer to the expiration date on the package labels. Do not use kits after the expiration date.

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 - Certificates of Analysis
 - Safety Data Sheets (SDSs; also known as MSDSs)

Note: For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

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

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7 October 2015

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