

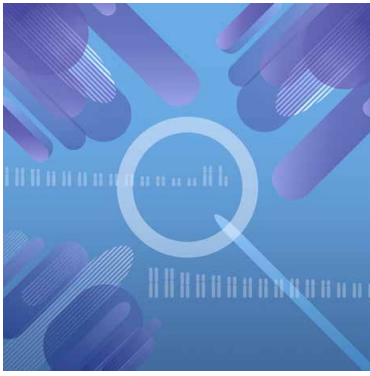


Reproductive health

Perform PGT-A with confidence

Explore reliable, scalable, and precise NGS solutions in preimplantation genetic testing for aneuploidy (PGT-A) with Ion ReproSeq PGS kits

Reliable, scalable, and precise PGT-A solutions



Preimplantation genetic testing for aneuploidy (PGT-A) identifies chromosome abnormalities in embryo samples for the research of *in vitro* fertilization (IVF) or intracytoplasmic sperm injection (ICSI). These genetic insights may increase the probability of success for future pregnancies and healthier future generations.

Ion ReproSeq™ PGS kits offer comprehensive PGT-A solutions with simple NGS workflows—making aneuploidy analysis accessible to most labs, regardless of expertise.

Now, Ion ReproSeq PGS kits include even more quality control (QC) features and simpler workflows to help you confidently deliver reliable and precise aneuploidy analysis with NGS.

Benefits of Ion ReproSeq PGS kits

- ✓ **A complete PGT-A workflow**
from sample to report with built-in software for aneuploidy analysis
- ✓ **Rapidly detect** whole-chromosome aneuploidy, segmental aneuploidy, and mosaicism in as little as 10 hours*
- ✓ Multiple configurations to **scale with your business**
- ✓ Unparalleled service and support to help you get started and **keep you going**

* Turnaround time for the Ion ReproSeq™ PGS Kit with Ion 510™ Chips (16 samples/run) is less than 10 hours with less than 2 hours of hands-on time.


“The Ion ReproSeq PGS kit protocol works well right off the shelf.”

—Catherine Welch, Sequence46



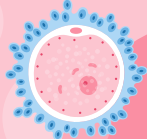
Deliver premium PGT-A analysis with the Ion AmpliSeq Polyploidy Panel

The Ion AmpliSeq™ Polyploidy Panel is now available as an add-on to Ion ReproSeq PGS kits. The panel delivers genetic insights on triploidy, maternal DNA contamination, and sibling QC through targeted sequencing of single-nucleotide polymorphisms (SNPs). Learn more about these new features below.



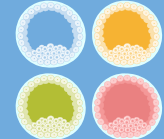
Identify triploidy (69,XXX)

- On conventional PGT-A plots, 69,XXX females appear identical to 46,XX ones—making them impossible to differentiate[1]
- Confidently identify samples with lethal triploidy 69,XXX with SNP-based analysis



Assess maternal contamination risk

- Maternal cumulus cells can contaminate an embryo sample and potentially skew PGT-A results[2]
- Assess potential maternal contamination with SNPs—and prioritize low-risk samples



Track samples with sibling QC

- Sample mix-ups can happen in any lab; however, in PGT-A, identifying the correct sample is critical
- Sibling QC uses over 500 SNPs to confirm that tested samples come from full genetic siblings

1. ESHRE PGT-SR/PGT-A Working Group; Coonen E, Rubio C, Christopikou D, et al. ESHRE PGT Consortium good practice recommendations for the detection of structural and numerical chromosomal aberrations. *Hum Reprod Open*. 2020 May 29;2020(3):hoaa017. doi: 10.1093/hropen/hoaa017. PMID: 32500102; PMCID: PMC7257111.

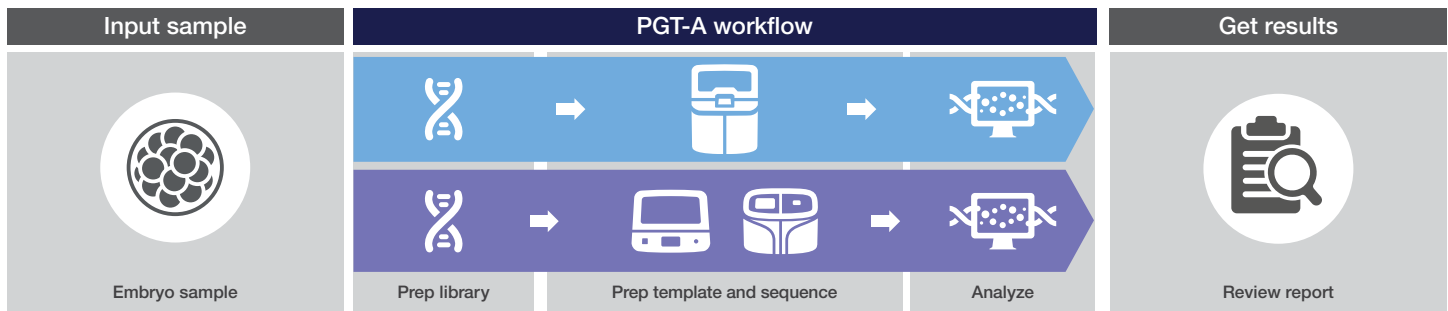
2. Hammond et al. Characterizing nuclear and mitochondrial DNA in spent embryo culture media: genetic contamination identified. *Fertil Steril*. 2017 Jan;107(1):220–228.e5. doi: 10.1016/j.fertnstert.2016.10.015. Epub 2016 Nov 16. PMID: 27865449.

Complete PGT-A workflow

Ion ReproSeq PGS kits contain all the materials you need for a complete PGT-A workflow using [Ion Torrent™ NGS systems](#). Laboratorians—regardless of experience—can get up and running quickly with this PGT-A solution with minimal training and basic molecular biology expertise.

Minimal hands-on time

In just three steps and as little as 10 hours, you can get from sample to report with a complete PGT-A workflow using Ion Torrent NGS systems. After manual library prep (<2 hours of hands-on time), the workflow is fully automated with minimal touchpoints, simplifying staff training and scheduling, and improving workflow consistency. Analysis is simple and straightforward with built-in software, making it easy to generate reports.



Complete PGT-A workflows with Ion ReproSeq PGS kits. The Ion Torrent™ Genexus™ Integrated Sequencer (blue) offers an all-in-one solution with a single system for templating, sequencing, and analysis for up to 192 PGT-A samples. The Ion Chef™ and Ion GeneStudio™ S5 systems (purple) offer a scalable workflow for 16, 24, or 96 PGT-A samples, with the option to simultaneously perform PGT-M (monogenic disorders). Both options include built-in software for automatic data analysis and reporting.

Scalable, easy-to-learn NGS systems

Ion ReproSeq PGS kits leverage the scalability and precision of Ion Torrent NGS solutions to offer important scientific insights for future reproductive decisions. These easy-to-learn instruments feature cartridge-loaded reagents, a straightforward user interface, and automated steps to reduce user errors, helping your lab get up and running quickly with PGT-A research.



Integrated PGT-A solution with maximum throughput

Ion ReproSeq kits are now available for the Genexus Integrated Sequencer. With all-in-one template preparation and sequencing, Genexus sequencers simplify your PGT-A workflow with load-and-go functionality and intuitive software in a single instrument.

The flexible design of Ion Torrent™ GX5™ Chips lets you analyze up to 192 PGT-A samples per run for maximum throughput.



[Read more in our brochure on the Ion Torrent™ Genexus™ System](#)

Agile workhorse for reproductive health research

Ion Chef and Ion GeneStudio S5 systems are an agile solution for reproductive health, with applications in expanded carrier screening, PGT, and newborn screening research.

Ion ReproSeq PGS kits enable analysis of 16, 24, or 96 PGT-A samples per run with the option to simultaneously perform combined PGT-A/PGT-M (monogenic disorders) in the same workflow from a single embryo sample.



[Video: Combined PGT workflow on Ion GeneStudio S5 systems](#)

Ordering information

Description	Quantity	Cat. No.
Preimplantation genetic testing		
Ion ReproSeq PGS Kit with GX5 Chips (24 samples/lane)	192 samples	GX34902
Ion ReproSeq PGS Kit with GX5 Chips (48 samples/lane)	384 samples	GX34903
Ion AmpliSeq Polyploidy Panel Kit with GX5 Chips	384 samples	GX55689
Ion SingleSeq Barcode Plate Set GX 101–196 and Reagents Kit	96 reactions	A50250
Ion SingleSeq Barcode Plate Set GX 201–296 and Reagents Kit	96 reactions	A50251
Ion SingleSeq Barcode Plate Set GX 301–396 and Reagents Kit	96 reactions	A50252
Ion SingleSeq Barcode Plate Set GX 401–496 and Reagents Kit	96 reactions	A50253
Ion ReproSeq PGS Kit with Ion 510 Chips (16 samples/run)	64 samples	A34899
Ion ReproSeq PGS Kit with Ion 520 Chips (24 samples/run)	96 samples	A34900
Ion ReproSeq PGS Kit with Ion 530 Chips (96 samples/run)	384 samples	A34901
Ion AmpliSeq Polyploidy Panel Kit with Ion 520 Chips	80 samples	GS45691
Ion AmpliSeq Polyploidy Panel Kit with Ion 530 Chips	480 samples	GS45690
Sequencing systems		
Genexus Integrated Sequencer		A45727
Ion GeneStudio S5 System		A384194
Ion GeneStudio S5 Plus System		A384195
Ion GeneStudio S5 Prime System		A384196
Ion GeneStudio S5 System + SmartStart Orientation		A38405
Ion GeneStudio S5 Plus System + SmartStart Orientation		A38408
Ion GeneStudio S5 Prime System + SmartStart Orientation		A38411
Data analysis		
Ion Reporter Software Server System		4487118
Analytical validation services		
Ion ReproSeq Complete Validation Solution		A47476
Priority Technical Support Plan for reproductive health solutions		
Priority Technical Support Plan for the Genexus Integrated Sequencer	1 year	ZGLPSCGENEXUS
Priority Technical Support Plan for the Ion GeneStudio S5 System	1 year	ZGLPSCIONS5
Priority Technical Support Plan for the Ion GeneStudio S5 Plus System	1 year	ZGLPSCIONS5PLUS
Priority Technical Support Plan for the Ion GeneStudio S5 Prime System	1 year	ZGLPSCIONS5PRIME
Training packages		
Ion ReproSeq Training Package		TRN00362

 Learn more at thermofisher.com/reproseq

ion torrent