



PG-Seq[™]

A Complete NGS Workflow Solution for
Pre-Implantation Genetic Testing

RECOMMENDED EQUIPMENT AND CONSUMABLES LIST

To accompany PG-Seq[™] (WGA & Library Preparation) Module TDS Version 1.2

To accompany PG-Seq[™] (Software) Module TDS Version 1.0

1.1 Clean Laboratory Equipment

<input checked="" type="checkbox"/>	Item	PKI(A) use or recommend	Used for
<input type="checkbox"/>	Laminar flow cabinet	Generic	Clean, PCR free location to add lysis reagents, make PCR mastermixes for the WGA and labelling reactions and add the WGA PCR mastermix to cells.
<input type="checkbox"/>	Mini Centrifuge able to accommodate 1.5mL, 0.5mL, 0.2mL tubes	Generic	To spin down reagents to the bottom of the tube eg PCR mastermixes and lysis and WGA mastermix
<input type="checkbox"/>	Pipettes (2, 10, 20, 100 & 200µL)	Eppendorf or other	Liquid handling
<input type="checkbox"/>	Tube racks for 1.5, 0.5 or 0.2mL tubes (2-3)	Generic	Holding place for RHS reagents and mastermix tubes
<input type="checkbox"/>	Cold block	Generic	Holding place for cells and lysed cells
<input type="checkbox"/>	Freezer (-20°C)	Generic	Storing reagents kit
<input type="checkbox"/>	PCR machine with hotlid and programmable ramp rate to 0.25°C/sec or 1°C/4 sec for WGA PCR	Please confirm make and model with RHS	Cell lysis and WGA PCR

1.2 Clean Laboratory Consumables

<input checked="" type="checkbox"/>	Item	PKI(A) use or recommend	Used for
<input type="checkbox"/>	Pipettes tips (low-binding, barrier filter)	Suitable for the available pipettes	Liquid handling
<input type="checkbox"/>	PCR thin walled reaction tube with flat cap (0.5mL or 0.2mL)	Life Technologies Applied Biosystems N801-0737 (0.5mL)	Biopsy collection
<input type="checkbox"/>	Surgical masks-disposable	McNeils or Generic	At all times
<input type="checkbox"/>	Non woven barrier gown- disposable	Medirite GN001-Blue or generic	At all times
<input type="checkbox"/>	Hairnets-disposable	Generic	At all times
<input type="checkbox"/>	Molecular grade tubes (1.5mL)	Sarstedt 72.706.200 or Generic	Mastermix preparation
<input type="checkbox"/>	Black fine tip permanent pen	Generic	Labelling mastermix tubes. Note that all cell tubes should be labelled using a labelling machine for long term storage
<input type="checkbox"/>	Gloves powder-free	Generic	At all times
<input type="checkbox"/>	75% ethanol	Generic	General cleaning – note do not use Ethanol if these processes are being performed in an embryology laboratory.
<input type="checkbox"/>	PCR tube labels (freezer compatible)	Generic	Tube labelling

2.1 General Laboratory Equipment

<input checked="" type="checkbox"/>	Item	PKI(A) use or recommend	Protocol step
<input type="checkbox"/>	PCR machine with hotlid and programmable ramp rate to 0.25°C/sec or 1°C/4 sec for WGA PCR	Please confirm make and model with distributor or RHS	Cell lysis and WGA PCR
<input type="checkbox"/>	Freezer (-20°C)	Generic	Storing -20°C reagents and samples
<input type="checkbox"/>	Fridge (4°C)	Generic	Storing 4°C reagents
<input type="checkbox"/>	Pipettes 2, 20, 100 & 200µL	Eppendorf or other	Liquid handling. Note that this set of pipettes must not be used in the Clean Laboratory
<input type="checkbox"/>	Tube racks (2-3)	Generic	Holding tubes for PCR
<input type="checkbox"/>	Multi-channel pipette (up to 100µL)	Eppendorf or other	Manual handling during library prep

2.1 General Laboratory Equipment (cont.)

<input checked="" type="checkbox"/>	Item	PKI(A) use or recommend	Protocol step
<input type="checkbox"/>	Mini centrifuge to accommodate 1.5mL, 0.5mL, 0.2mL tubes	Generic	Spinning down reagents to the bottom of the tube
<input type="checkbox"/>	Gel electrophoresis equipment	BioRad 164-0301	Visualising WGA products
<input type="checkbox"/>	Gel visualisation and documentation system	BioRad GelDoc EZ	Visualising WGA products
<input type="checkbox"/>	Electronic scales	Generic	Making agarose gel & buffers
<input type="checkbox"/>	Measuring cylinders (100mL, 1L) Conical flask (250mL), beaker (2L)	Generic	Making agarose gel & buffers
<input type="checkbox"/>	Bottles 1L (3)	Generic	Making gel tank buffers
<input type="checkbox"/>	Vortex	Generic	Mixing sample and buffer for Qubit
<input type="checkbox"/>	Qubit Fluorometer	ThermoFisher	Quantification of DNA
<input type="checkbox"/>	TapeStation or Bioanalyzer	Agilent	Quantification and QC of library preps (possibly optional for high throughput)
<input type="checkbox"/>	96 well plate centrifuge	Generic	Manual handling during library prep
<input type="checkbox"/>	96 well plate vortex	Generic	Manual handling during library prep
<input type="checkbox"/>	Magnetic stand	Ambion or other	Bead clean-up of DNA during library prep
<input type="checkbox"/>	Cold block or esky and ice	Generic	Manual handling during library prep
<input type="checkbox"/>	MiSeq/MiniSeq Sequencer	Illumina	Sequencing

2.2 General Laboratory Consumables

<input checked="" type="checkbox"/>	Item	PKI(A) use or recommend	Used for
<input type="checkbox"/>	Pipettes tips (low-binding, barrier filter)	Suitable for the available pipettes	Liquid handling
<input type="checkbox"/>	DNA marker 100-5000bp	GeneWorks DMW-100M	Visualising WGA and labelling PCR products
<input type="checkbox"/>	Gel Red (ethidium bromide substitute)	Biotium 41003	Visualising WGA products
<input type="checkbox"/>	Molecular grade tubes (0.5 or 1.5mL)	Sarstedt 72.706.200 or Generic	Gel loading preparation
<input type="checkbox"/>	Agarose (for 1% gel)	Promega V3121	Visualising WGA products
<input type="checkbox"/>	Gel tank buffer (0.5x TBE)	Amresco 0478-2PK	Visualising WGA products
<input type="checkbox"/>	Gel load buffer (10mL: 1.5g Ficoll; 0.02g Bromphenol blue)	Sigma	Visualising WGA products
<input type="checkbox"/>	Microplate 96 well for mixing samples with load buffer (optional) or parafilm	Sarstedt 82.1583	Visualising WGA products
<input type="checkbox"/>	Black fine tip permanent pen	Generic	General labelling of tubes
<input type="checkbox"/>	PCR tube labels (freezer compatible)	Generic	Biopsy tube labelling
<input type="checkbox"/>	Gloves powder-free	Generic	At all times
<input type="checkbox"/>	Molecular-grade H ₂ O (MilliQ H ₂ O)	Generic	Making gel load & gel tank buffers
<input type="checkbox"/>	Molecular grade tubes (1.5mL)	Sarstedt 72.706.200 or Generic	Mastermix preparations
<input type="checkbox"/>	100% ethanol	Generic	To make 80% for bead purification
<input type="checkbox"/>	TapeStation reagents or Bioanalyzer	Agilent	Quantification and QC of library preps (possibly optional for high throughput)
<input type="checkbox"/>	PCR plate, 96 well, semi skirted	Generic	Handling and storage of DNA during library prep
<input type="checkbox"/>	Adhesive 96 well plate seal	BioRad or generic	Handling and storage of DNA during library prep
<input type="checkbox"/>	Clean-up beads	Ampure	Bead clean-up of DNA during library prep
<input type="checkbox"/>	Qubit assay tubes	ThermoFisher Q32856	Quantification of DNA
<input type="checkbox"/>	Quant-iT dsDNA HS array kit	ThermoFisher Q33120	Quantification of DNA
<input type="checkbox"/>	MiSeq Reagent Kit v3 (150-cycle)	Illumina MS-102-3001	Sequencing of DNA
<input type="checkbox"/>	Tween 20	Generic	MiSeq instrument washes

2.3 Hardware requirements for PG-Seq™ Software

Operating System:	64-bit platform (Windows/OSX/Linux)
Memory:	Minimum 4GB (Recommended 8GB)
Hard-drive:	Minimum 500GB

About PKI(A) Ltd

PerkinElmer Health Sciences (Australia) Pty Ltd (PKI(A)) is a developer of advanced single cell genomic technologies with a focus on improving health and research outcomes.

PG-Seq™ is a Research Use Only product and is not to be used for diagnostic procedures

