

PicoPLEX® WGA Kit

Whole Genome Amplification for Library Construction for Use with Single Cells

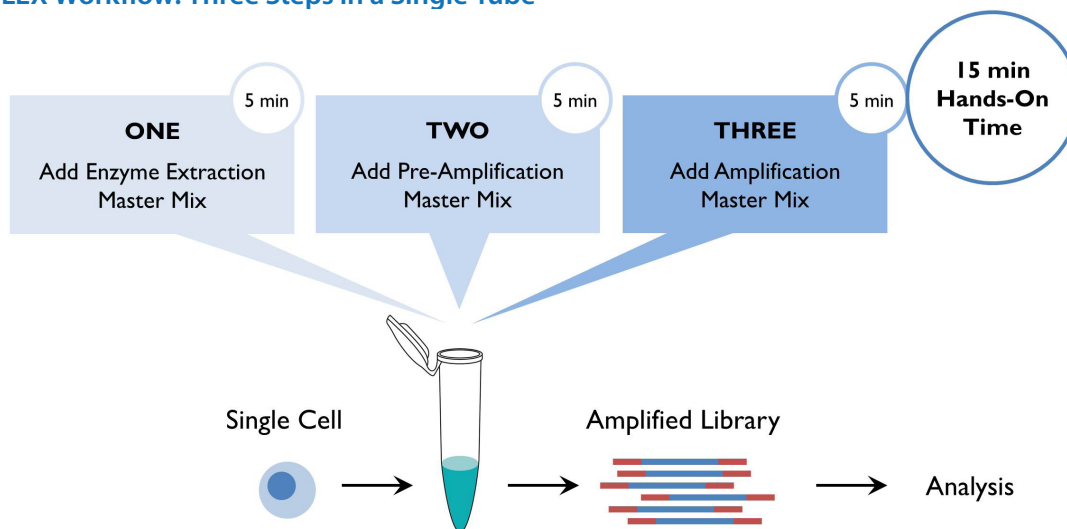


The ability to amplify DNA to yield a highly reproducible library when working with small amounts of DNA such as that from a single cell is now possible! The patented PicoPLEX® WGA kit is designed and optimized for amplification of single copy genomic DNA with input concentrations of 6 pg or less. The easy-to-use single tube protocol reduces handling errors, dramatically improves time to results and reduces background. Use PicoPLEX WGA kits to prepare libraries to measure aneuploidy, copy number variation and allele representation on your choice of array platform, either BAC or oligo, or in PCR assays.

PicoPLEX WGA technology is used and trusted by leading providers in the IVF community for pre-implantation genetic screening and diagnostics (PGS/PGD).

- Reproducible results from single cell or 6 pg or less DNA
- Superior reproducibility of allele representation
- Easy to use and automate
- Unambiguous results at all resolutions

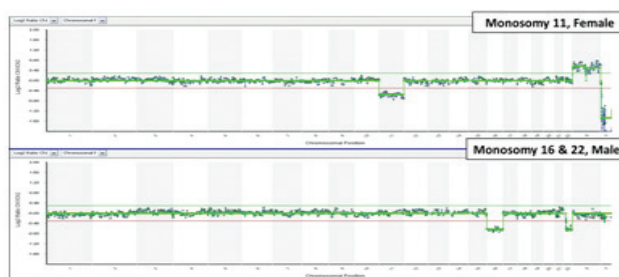
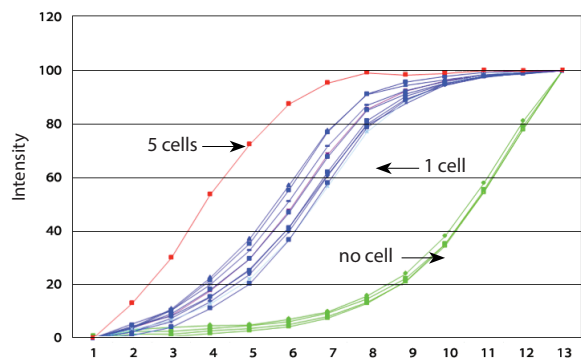
PicoPLEX Workflow: Three Steps in a Single Tube



“SUREPLEX™ (PICOPLEX TECHNOLOGY) REPRESENTS A MAJOR STEP FORWARD IN AMPLIFICATION TECHNOLOGY...WE SELECTED SUREPLEX DUE TO ITS RAPID PROTOCOL, HIGHLY REPRESENTATIVE AMPLIFICATION, AND LOW ALLELE DROP OUT WHEN COMPARED TO OTHER AMPLIFICATION METHODS.”

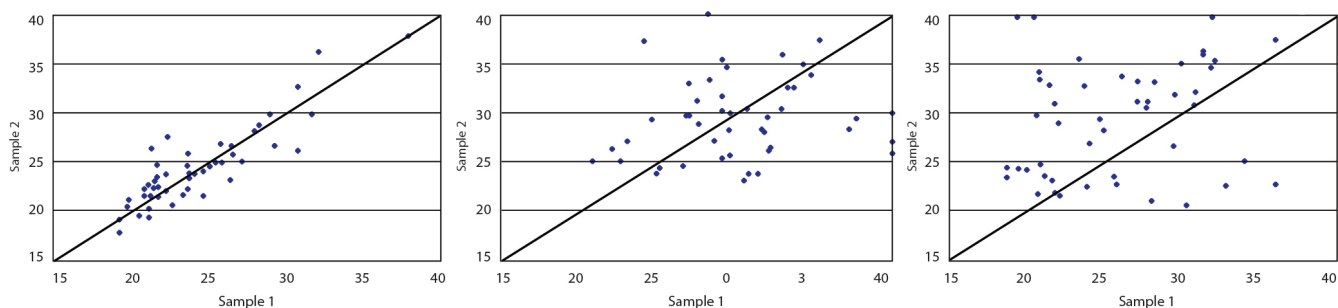
—NICK HAAN, FOUNDER OF BLUEGNOME

PicoPLEX® WGA Kit Provides Clear Results from a Single Cell



Amplification of single cells is reproducible and yields accurate CNV results. Flow-sorted cancer cells were amplified with the PicoPLEX WGA Kit. Each of the cells amplified at the same rate, and resulted in a similar, predictable yield (left). The sample containing no cells shows very low background. Single-blastomere biopsies were amplified using the PicoPLEX WGA Kit, labeled and hybridized to BlueGnome's® 24sure® arrays at Genesis Genetics Institute. Note clear indication of CNV (right). In 2011, ESHRE clinical trials confirmed accuracy of karyotyping using PicoPLEX technology.

PicoPLEX WGA Kit Outperforms the Competition in Locus-specific q-PCR assays



Locus-specific q-PCR was used to quantify 48 loci in independent single-cell libraries. Data shown compares results of DNA from two individual samples amplified with (left to right) PicoPLEX WGA Kit, GenomePLEX® and GenomiPhi™ using 10 pg of input DNA. More than 90% of the product from PicoPLEX reproducibly produced identifiably human sequences.

	Human Signal	Correlation Coefficient
PicoPLEX	>90%	0.73
GenomiPhi™	3%	0.23
GenomePlex™	13%	0.19

*10 pg of input DNA

Publications

Liang L, Wang CT, Sun X, Liu L, Li M, Witz C, Williams D, Griffith J, Skorupski J, Haddad G, Gill J, Wang WH. "Identification of chromosomal errors in human preimplantation embryos with oligonucleotide DNA microarray". *PLoS One*. 2013 Apr 16;8(4):e61838. doi: 10.1371/journal.pone.0061838. Print 2013. Houston Fertility Institute, Houston, Texas, United States of America.

Jaroudi S, Wells D. "Microarray-CGH for the assessment of aneuploidy in human polar bodies and oocytes". *Methods Mol Biol*. 2013;957:267-83. doi:10.1007/978-1-62703-191-2_19.

Ordering Information

PicoPLEX® WGA Kit contains everything needed to do 50 reactions.

Cat. # R30050 PicoPLEX® WGA Kit 50 reactions

Order on-line at www.rubicongenomics.com. For custom orders contact busdev@rubicongenomics.com.

For research use only. It may not be used for any other purposes including, but not limited to, use in diagnostics, forensics, therapeutics, or in humans. PicoPLEX WGA Kit may not be transferred to third parties, resold, modified for resale or used to manufacture commercial products without prior written approval of Rubicon Genomics, Inc. PicoPLEX WGA Kit is protected by US Patent 8,206,913 and EU pending applications.

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