



**Q:** Does PicoPlex reproducibly amplify genomic loci?

**A:** Yes, with about 90% correlation coefficient for Q-PCR  $C_t$  data from replicate single-cell reactions.

**Q:** Are all genomic loci equally represented in PicoPlex products?

**A:** No, PicoPlex products have reproducibly high representation for both alleles of 70 – 90% of genomic loci and reproducibly low representation of the remainder of loci.

**Q:** Does PicoPlex amplify GC-rich genomic regions?

**A:** Yes, the PicoPlex has been optimized to amplify GC-rich regions with excellent representation.

**Q:** Can buffer control reactions be distinguished from single cell reactions?

**A:** Yes, PicoPlex amplifies with single-copy sensitivity and high specificity, with expected 5 PCR cycle delay between WGA of single cells and WGA of buffer controls.

**Q:** How robust is the PicoPlex process?

**A:** PicoPlex has about 90% amplification success rate with flow-sorted tissue culture cells, limited by the uncertainties of sorting rather than amplification. Single cells always give a high, reproducible yield of amplified genomic DNA. Buffer controls should always give virtually no background.

**Q:** How rapid is PicoPlex?

**A:** PicoPlex lyses cells and amplifies the DNA to an end-point of 2 – 5 ug in < 3 hours.

**Q:** Should cells be washed before collection?

**A:** Yes, cells should be washed to minimize extraneous DNA or growth media contaminants. We recommend washing in PBS (Ca-free, Mg-free, BSA-free) and limiting carry over of wash buffer to less than 2.5 microliters.

**Q:** Which cell collection methods are compatible with PicoPlex?

**A:** Flow sorting, dilution, and micromanipulation are compatible with PicoPlex.

**Q:** Are there special requirements for flow sorting?

**A:** Yes, we strongly recommend not fixing or staining the cells, and using light scattering or phase contrast to sort or collect.

**Q:** What cell types have been successfully amplified by PicoPlex?

**A:** Single blastomeres, polar bodies, trophoblasts, amniocytes, and cultured cells have been amplified successfully.

**Q:** How many cells can be amplified by PicoPlex?

**A:** The same robust, reproducible amplification is obtained from single cells as from 1,000 cells, but the greatest advantage over other WGA methods are obtained with single cells.

**Q:** Can PicoPlex be used for SNP genotyping?

**A:** Yes, PicoPlex is well suited for SNP genotyping, because the same loci are reproducibly amplified between different cells, and SNPs contained within well-represented regions can be accurately detected without stochastic dropouts and noise associated with other WGA methods.

**Q:** Can PicoPlex be used for gel-based STR, microsatellite, or other PCR-based genotyping?

**A:** Sometimes. It should work normally if the amplimers are less than about 400 bases long.

**Q:** Can PicoPlex be used for probe-based Q-PCR, and sequencing assays?

**A:** Yes, as long as the amplimers are less than about 400 bases.

**Q:** Will BAC and oligonucleotide arrays work?

**A:** Yes. We strongly recommend amplifying both the experimental and the reference DNA using PicoPlex, to normalize any locus-specific bias introduced by PicoPlex. This will reduce noise and improve quantification.

**Q:** How can I label PicoPlex products for microarrays?

**A:** Random-prime labeling, and chemical labeling work well.

**Q:** How much amplified DNA do I need for array and Q-PCR assays?

**A:** We recommend starting with the amount recommended in the instructions from the assay manufacturer, however you might try larger amounts as it might improve results even further.