

## Unlock Your Discovery Potential with Single-Cell Whole Genome Amplification

### ResolveDNA Whole Genome Amplification System



#### Enables whole genome sequencing from a single cell

Whole genome amplification from single cells or low-input (4 pg to <10 ng) DNA samples



#### Provides industry-leading genomic coverage

Leverages a novel patented technology, primary template-directed amplification (PTA)<sup>1</sup>, to dramatically increase genomic capture and coverage to 97%



#### Results in unprecedented single nucleotide variant (SNV) calling resolution

Reduces biases, experimental artifacts, and poor reproducibility associated with other whole genome amplification methods<sup>2</sup>



#### Fits into established laboratory protocols

Compatible with various methods of single-cell singulation, sequencing platforms, and downstream applications, including whole exome and panel-based sequencing<sup>3</sup>



#### Scales to experiment size

Low-cost, automation-compatible, scalable approach with up to 384 reactions per kit



#### Bioinformatics analysis included

Bioinformatics analysis and data visualization through BaseJumper™ bioinformatics platform



#### References:

1. Gonzalez-Pena V, et al. Proc. Natl. Acad. Sci. U.S.A. 2021; 118 (24): e2024176118; doi: 10.1073/pnas.2024176118
2. Luquette L, et al. Nat Gen. 2022; 54: 1564–1571. doi: 10.1038/s41588-022-01180-2
3. Data on file
4. Chen C, et al. Science 2017; 356: 189–194. doi: 10.1126/science.aak9787

**Key Feature: Industry-Leading Performance**

Characteristic	Whole Genome Amplification (WGA) Method		
	ResolveDNA	WGA Method 1	WGA Method 2
Genome Mapping	<b>97%</b>	91%	88%
Genome Recovery	<b>97%</b>	73%	65%
CV of Coverage	<b>0.8</b>	1.3	1.8
SNV Sensitivity	<b>92%</b>	70%	65%
SNV Precision	<b>99%</b>	88%	87%

**Figure 1: ResolveDNA WGA Kits outperform other methods with respect to data quality and variant calling metrics.** Ten single cells were isolated from a human B-lymphocyte cell culture (CEPH1463/NA12878/ GM12878 human genome reference standard). Whole genome amplification (WGA) was performed on individual cells, using the ResolveDNA. WGA products were converted to indexed libraries and subjected to high-coverage whole genome sequencing (WGS) on the Illumina® platform. For the other WGA methods (WGA Method 1, 2), low-pass WGS data (generated from individual BJ1 fibroblasts), were obtained from a previously study<sup>4</sup>, with top performing methods shown. Raw data for all samples were aligned and pre-processed for variant calling using the same pipeline. All metrics shown in the table were generated from randomly subsampled BAM files (300 million reads per cell). WGA Method 1: Mixed Method WGA; WGA Method 2: Multiple Displacement Amplification (MDA)

**Products**

Code	Product	Description
100137	<b>ResolveDNA® Complete Starter Pack:</b> ResolveDNA™ Whole Genome Amplification Kit ResolveDNA™ Library Preparation Kit ResolveDNA™ Multi-Use Library Adapters BioSkryb PCR Plate Spinner BioSkryb PCR Plate Thermal Mixer BioSkryb PCR Cooler BioSkryb Low Bind 96-well PCR Plates PCR Plate Sealing Film ResolveDNA™ PTA-Grade Cell Buffer Pack ResolveDNA™ Bead Purification Kit ResolveDNA™ Magnetic Plate	Everything needed to run PTA from start to finish. Each high-quality product in the ResolveDNA Complete Starter Pack has been carefully developed to provide optimal performance for the ResolveDNA Whole Genome Amplification Kit.
100180	<b>ResolveDNA® Consumables Only Starter Pack:</b> ResolveDNA™ Whole Genome Amplification Kit ResolveDNA™ Bead Purification Kit ResolveDNA™ Library Preparation Kit ResolveDNA™ Multi-Use Library Adapters BioSkryb Low Bind 96-well PCR Plates ResolveDNA™ PTA-Grade Cell Buffer Pack PCR Plate Sealing Film	The ResolveDNA Consumables Only Starter Pack includes consumables needed for optimal results with your ResolveDNA Whole Genome Amplification Kit.
100545	<b>ResolveDNA® Whole Genome Amplification Kit</b>	PTA-based kit for accurate and reproducible whole genome amplification from single cells and low-input DNA inputs.
100605	<b>BaseJumper™ Bioinformatics Platform</b>	A complete bioinformatics solution for multiomic data analysis and visualization.

For a complete list of services, products, and pricing, email a member of our team, [info@bioskryb.com](mailto:info@bioskryb.com)



All data on file.

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