

Tapestri Platform for Single-cell Multiomics

Uncover Genotypic and Immunophenotypic
Insights Simultaneously from Single Cells.



Mission Bio specializes in facilitating the widespread adoption of single-cell DNA and multiomic analysis.

Our technology and solutions services offering is centered around our unique Tapestri Platform, which allows scientists and drug developers to analyze the genomic makeup of individual cells and elicit novel and crucial insights.



Tapestri Platform Highlights



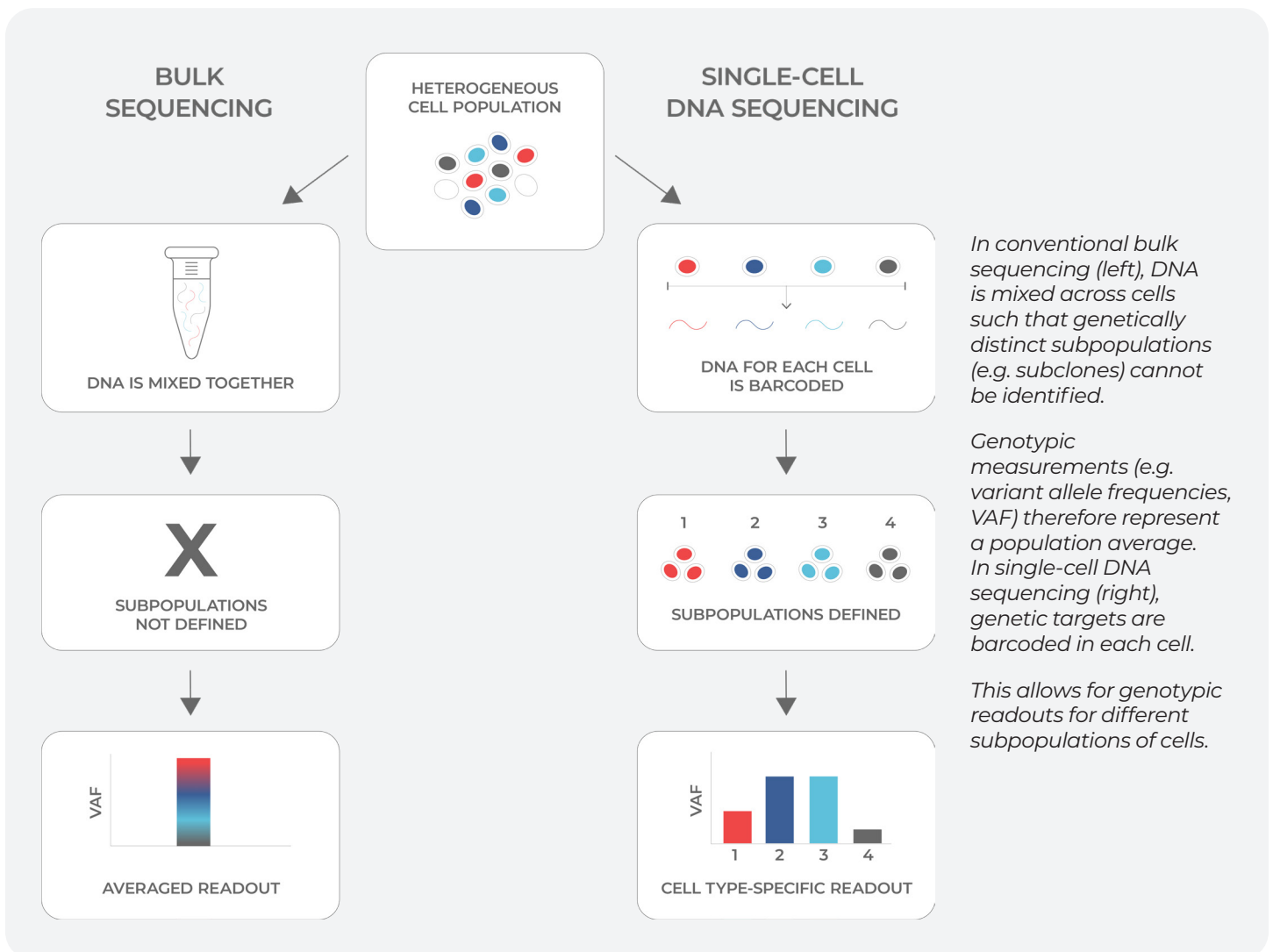
- Assess single nucleotide variants (SNV), insertions-deletions (INDEL), focal and genome-wide copy number variants (CNV), loss of heterozygosity (LOH), translocations, and surface protein expressions simultaneously in single cells for true multiomic insight
- Complete solution with core kits to take you from single cells to a sequencing-ready library and analysis tools to transform your multi-analyte data to actionable insights
- Targeted, customizable content for key oncology and cell and gene therapy applications
- Sample multiplexing capabilities for increased throughput and cost-efficiency

Why Single-cell Multiomics?

In the last decade, numerous biotechnological advances have translated into improvements in medicine. Yet, limitations in analytical tools still hinder the study of pathologies and the development of life-changing therapies.

BENEFITS OF SINGLE-CELL MULTIOMICS ANALYSIS:

- Bulk assays mix DNA across cells, providing average readouts. Single-cell DNA sequencing evaluates individual cell genotypes for a more detailed understanding of biological complexity.
- Challenges in understanding heterogeneous diseases like cancer and in drug development emphasize the need for cellular-level information. Single-cell DNA sequencing preserves the information of individual cells needed to elucidate the underlying mechanisms driving complex diseases and to characterize therapeutic candidates to ensure safety and efficacy.
- Conventional single-cell workflows involve separate assays, leading to drawbacks like sample preservation issues and complex data integration. Tapestry addresses these challenges by simultaneously measuring DNA and cell-surface proteins in thousands of individual cells, preserving samples and enabling quick, multi-parameter data collection.



Single-cell Applications

Single-cell analysis is advancing several scientific areas, including oncology and the development of advanced therapeutics. For instance, Tapestri is helping advance cancer translational research, where information about tumor architecture can be used to inform diagnosis, prognosis, and treatment strategies in a highly personalized fashion.

Tapestri is also helping advance the development of novel cell and gene therapies. By measuring multiple genotypic alterations across cells, therapy developers achieve deeper characterization of gene-modified cell therapies and assess in vivo gene therapies in model systems.

The benefits of single-cell analysis extend to clinical, academic, and pharmaceutical sectors alike. Investigators from these sectors are utilizing Tapestri to reveal therapy resistance, assess measurable residual disease (MRD), and characterize cell-based drug candidates.



SINGLE-CELL APPLICATIONS



Hematologic malignancies



Solid tumors



Genome editing



Biomarker discovery



Cell & gene therapy

ONCOLOGY RESEARCH

- **CLONAL EVOLUTION**
Track clonal evolution and reconstruct phylogenetic trees
- **TUMOR PROFILING**
Unravel tumor heterogeneity and discern early driver gene alterations
- **DISEASE MODELING**
Assess genome editing for use in pre-clinical disease modeling
- **THERAPY RESISTANCE**
Reveal therapy resistance mechanisms through the course of treatment
- **MRD**
Characterize measurable residual disease to power actionable insights
- **CHIP**
Distinguish leukemic clones from age-related Clonal hematopoiesis (CHIP)

PRECISION MEDICINE

- **THERAPY RESISTANCE**
Uncover molecular resistance mechanisms to improve patient stratification
- **MUTATIONAL PROFILING**
Reveal complex clonal architectures of occurring mutations over the course of disease
- **THERAPEUTIC DEVELOPMENT & SELECTION**
Understand clonal phylogeny and selection for lineage tracing and drug response

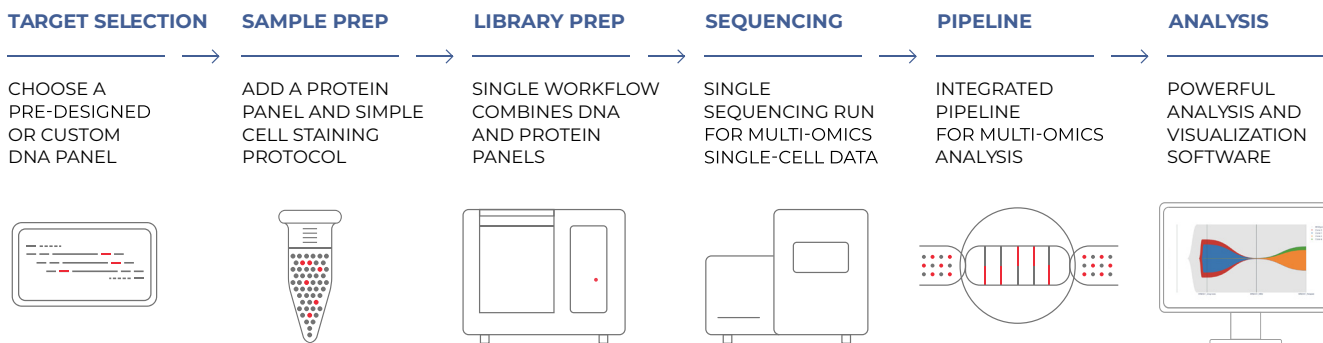
CELL & GENE THERAPY

- **GENE TRANSFER**
Measure transduction efficiency, vector copy number and integrated vs. episomal DNA at single-cell level as indicators for therapeutic safety and efficacy
- **GENE EDITING**
Concomitantly measure on- and off-target, multiplex, and zygosity of edits with immunophenotype to get a definitive view of genome editing outcomes
- **GENOME INTEGRITY**
Analyze genome-wide CNVs across thousands of cells for drug product safety studies. Concomitantly measure CNV with gene editing outcomes.

End-to-end Solution that Seamlessly Plugs into your NGS Workflow

Use the Tapestri instrument, reagents and consumables up-front of your next generation sequencing (NGS) system and then Tapestri Pipeline software for data analysis and visualization.

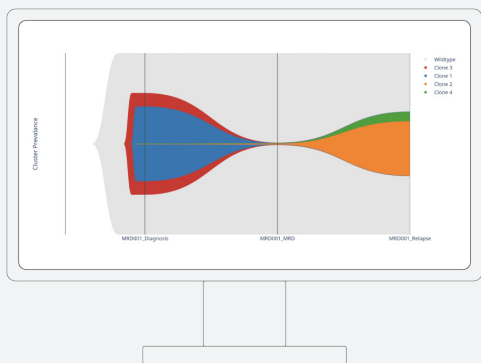
THE TAPESTRI WORKFLOW



*Optional sample multiplexing by antibody hashing or genotyping

From Complex Multi-analyte Data to Actionable, Ground-truth Insights

Tapestri Pipeline software solutions provide a streamlined bioinformatics workflow optimized for single-cell DNA and protein analysis. From sequence import to data analysis and visualization all packaged in a user-friendly experience, our turnkey analysis solutions ensure that you gain meaningful insights to advance your research.



Turnkey analysis and reporting software solutions include the Tapestri Single-cell MRD AML Software, Tapestri Multiple Myeloma Software, Tapestri Genome Editing Software, and Tapestri Genome Integrity CNV Software.



These turnkey solutions automate data analysis and output reports with easy-to-interpret, interactive data plots and visualizations to enable single-cell multiomics assessment of multiple myeloma, AML MRD, gene editing, and genome integrity.

Specifications and Components

TAPESTRI PLATFORM SPECIFICATIONS

Variant and analyte type detected	SNV, INDEL, focal- and genome-wide CNV, LOH, and translocation in DNA; Surface protein expression
Cell input requirement	20,000-100,000 cells
Throughput	Up to 14,000 cells
Instrument dimensions	In H x W x D, 12.5 in x 11.75 in x 12.25 in (31.75 cm x 29.85 cm x 31.33 cm)
Operating conditions	Standard laboratory environments. Not exceeding 6,562 ft (2,000 m) above sea level. Maintain 5 – 85% relative humidity, non-condensing. Maintain 4 in (10.2 cm) of clearance at the vents (back of instrument).
Power requirements	100 – 240 V AC power at 50 – 60 Hz; 2.0 A maximum

TAPESTRI PLATFORM COMPONENTS

Tapestri Instrument	MB01-0020
Tapestri Single-Cell DNA Cartridge Kit v3	MB03-0100
Tapestri Single-cell DNA Core Kit v3	MB03-0083
Tapestri Single-Cell DNA + Protein Core Kit v3	MB03-0084
Tapestri Single-Cell DNA Panel Kits	missionbio.com/panels
Tapestri Single-Cell DNA Custom Panel Kits	missionbio.com/panels/custom-panels/

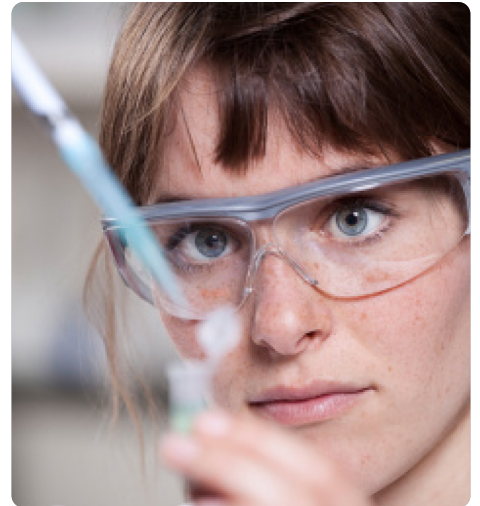
Mission Bio Supports Research and Therapy Development for Top Academic Centers and Pharma Companies

100+

Peer-reviewed publications worldwide

55+

PAD and IND-enabling projects with Top Global Pharma Partners



1000+

Worldwide users

15+

Novel custom assays developed and transferred to GMP

70%

of NCI Comprehensive Cancer Centers use Tapestri



CONTACT US TO LEARN MORE

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