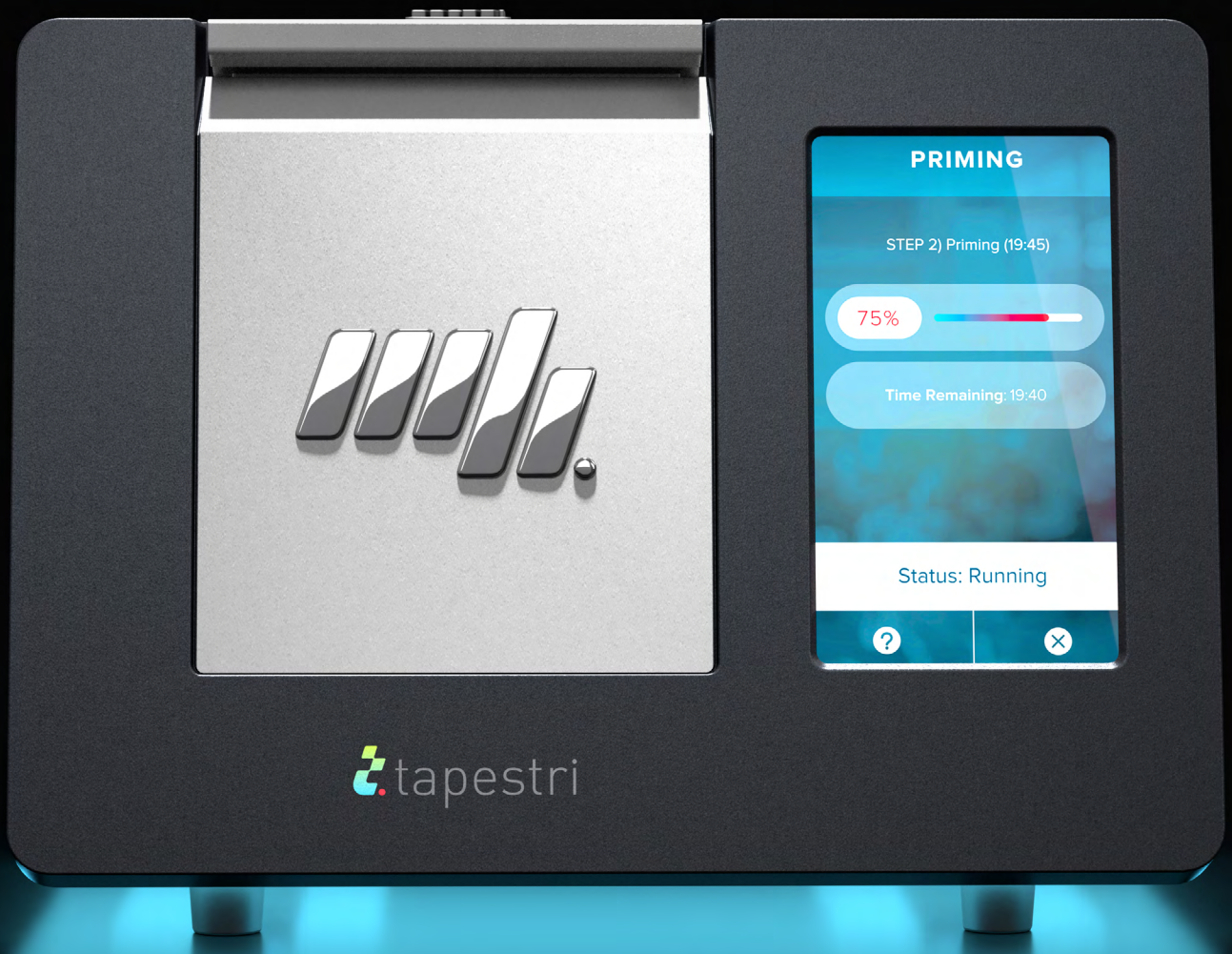
Tapestri Platform for Single-cell Multi-omics

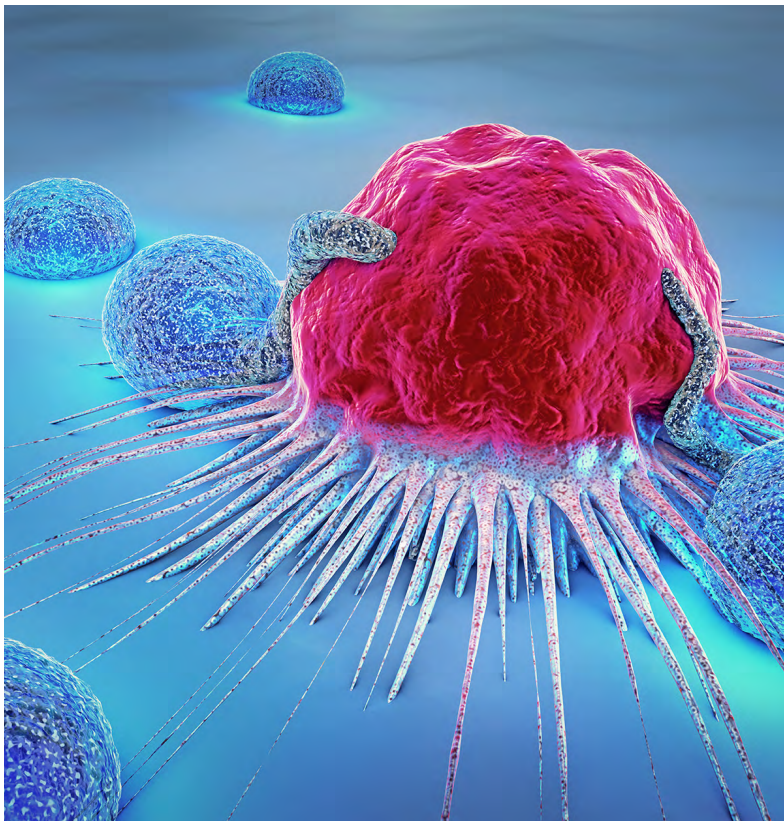
Uncover genotype and phenotype insights simultaneously from single cells



mission bio

Unravel Cellular Complexity with True Single-cell Multi-omics

The Tapestri® Platform is the world's first and only single-cell solution that provides both genotype and phenotype data from the same cell. Based on a novel two-step microfluidic workflow, the Tapestri Platform can access DNA and protein in single cells to give you a true multi-omics picture. With its unprecedented speed and scale, you can now get actionable insights needed to get to the ground truth and unravel the threads of cellular complexity.



Tapestri Platform Highlights

- Analyze DNA and protein expression simultaneously in single cells for true multi-omic insight
- Complete solution with core kits to take you from single cells to a sequencing-ready library and analysis tools to convert your multi-analyte data to actionable insights
- Targeted, customizable content for key oncology and cell and gene therapy applications

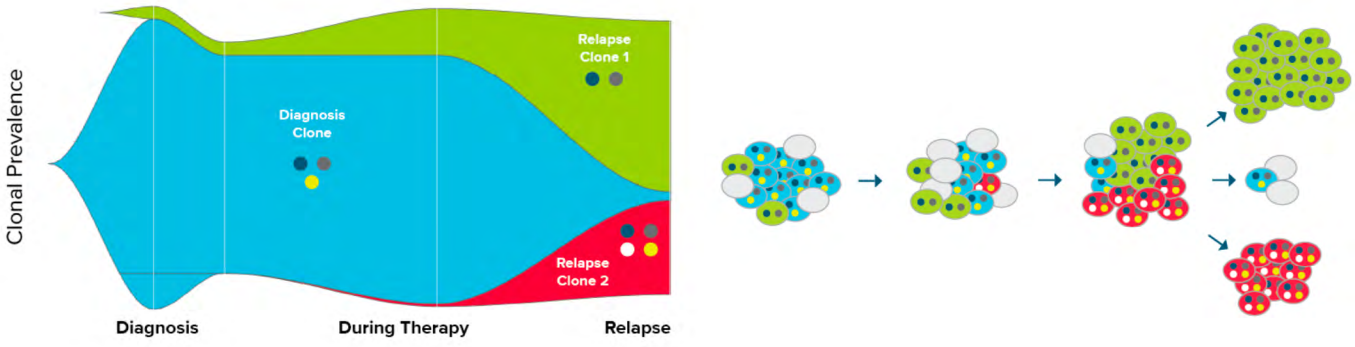
Why Single Cell?

Many genotyping workflows today rely on bulk assays, which mix DNA across cells and report average readouts. Although appropriate for some questions, these assays do not preserve the information of individual cells, and thus provide limited knowledge about biological complexity. Single-cell DNA sequencing evaluates the genotype of individual cells providing a richer picture of the sample. Single-cell analysis is advancing several scientific areas, including oncology and the development of advanced therapeutics such as novel cell and gene therapies.

Unlike bulk sequencing, single-cell sequencing enables you to:

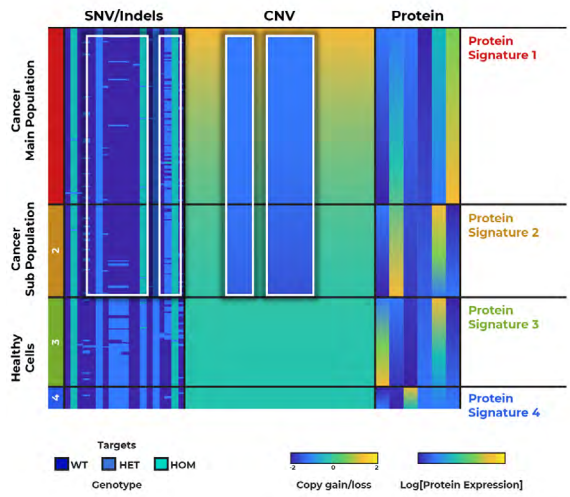
- Detect rare cell populations
- Identify co-occurring mutations
- Measure zygosity
- Resolve clonal heterogeneity

CLONAL RESOLUTION WITH SINGLE-CELL PRECISION



In order to see the evolution you need to understand the disease at a single-cell level.

THE POWER OF SINGLE-CELL MULTI-OMICS



Combining genotype and phenotype data from single cells offers the resolution for uncovering unique disease signatures for personalized therapeutics.

"A single cell multiomics platform really gives you a degree of detail, which we have inferred or assumed, but have never been able to prove until now. What we can do is drill down to confirm that those [DNA mutations and immunophenotypes] co-exist . . . what is going to make a difference for that patient, it's being able to target what is the true driving cause of the disease."

- Katherine D. Cummins, MD, FRACP, FRCPA

Penn
University of Pennsylvania

Targeted, Customizable Content for Key Applications

Tapestri® Single-cell DNA Panels allow you to focus on the mutations and regions of interest that are most relevant to your disease research. To get your experiments running with minimal time and effort, consider our pre-designed and wet lab-tested Tapestri Single-cell DNA Catalog Panels. Alternatively, choose from our new Tapestri Single-cell DNA Published Panels designed by leading researchers and verified for performance through peer-reviewed publications. If you require more flexibility, consider our pre-designed but customizable Tapestri Single-cell DNA Virtual Design Panels. For maximum versatility, create a Tapestri Single-cell DNA Custom Panel. To investigate genotype and phenotype across thousands of individual cells, add a Protein Panel (oligo-conjugated antibodies from BioLegend) into your Tapestri experiments.

Applications include hematologic malignancies, solid tumors, genome editing, biomarker discovery and cell and gene therapy.

Hematologic malignancies	**Solid tumors**	**Genome editing**	**Biomarker discovery**	**Cell & gene therapy**
Catalog Panels: • Acute Myeloid Leukemia • Chronic Lymphocytic Leukemia • Myeloid **Published Panels:** • Acute Lymphoblastic Leukemia • Myeloid Clonal Evolution • Myeloproliferative Neoplasms • Myeloid • Chronic Lymphocytic Leukemia **Virtual Design Panels:** • Acute Lymphoblastic Leukemia • Chronic Myeloid Leukemia • Classic Hodgkin's Lymphoma • Diffuse Large B-Cell Lymphoma • Follicular Lymphoma • Mantle Cell Lymphoma • Multiple Myeloma • Myelodysplastic Syndromes • Myeloproliferative Neoplasms • T-Cell Lymphoma **Protein Panel:** • TotalSeq-D Heme Oncology Cocktail	**Catalog Panel:** • Tumor Hotspot **Virtual Design Panels:** • Breast Cancer • Glioblastoma Multiforme	Partner with Mission Bio to implement single-cell multi-omics capabilities for genome editing, biomarker discovery and cell & gene therapy applications, and build a single-cell DNA or protein panel for the Tapestri Platform. Contact our Pharma Assay Development (PAD) representative for more information.		

Custom DNA Panels:	20 to 1,000 amplicons to cover DNA regions of interest	**Custom Protein Panels:**	Configure an antibody cocktail using TotalSeq-D Catalog Antibody Oligonucleotide Conjugates

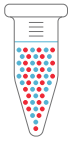
End-to-end Solution that Seamlessly Plugs into your NGS Workflow

Use the Tapestri instrument, reagents and consumables up-front of your NGS system and then Tapestri Pipeline and Taprestri Insights software for data analysis and visualization.

THE TAPESTRI WORKFLOW

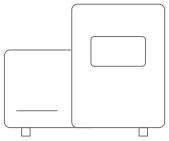
TARGET SELECTION
CHOOSE A PRE-DESIGNED OR CUSTOM DNA PANEL

SAMPLE PREP
ADD A PROTEIN PANEL AND SIMPLE CELL STAINING PROTOCOL

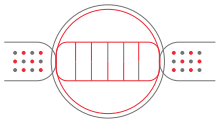


LIBRARY PREP
SINGLE WORKFLOW COMBINES DNA AND PROTEIN PANELS

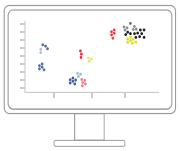
SEQUENCING
SINGLE SEQUENCING RUN FOR MULTI-OMICS SINGLE-CELL DATA



PIPELINE
INTEGRATED PIPELINE FOR MULTI-OMICS ANALYSIS



ANALYSIS
POWERFUL ANALYSIS AND VISUALIZATION SOFTWARE



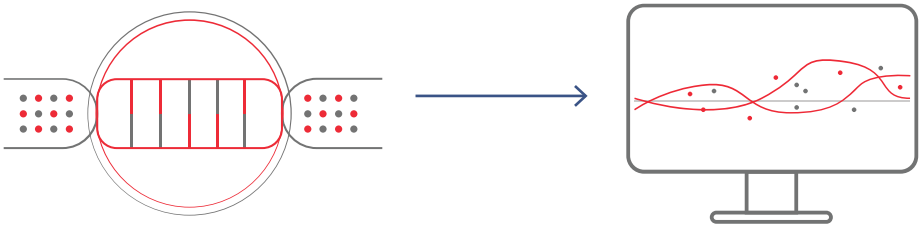
From Complex Multi-analyte Data to Actionable, Ground-truth Insights

Tapestri Pipeline and Tapestri Insights 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.

TWO STEP PROCESS

STEP 1
UPLOAD TO TAPESTRI PIPELINE

STEP 2
EXPLORE YOUR SUBCLONES IN TAPESTRI INSIGHTS



Tapestri Platform Specifications

TAPESTRI PLATFORM SPECIFICATIONS	
Variant and analyte type detected	SNV, indel, CNV, LOH and translocation in DNA; protein expression
Cell input requirement	20,000-100,000 cells
Throughput	Up to 10,000 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	PART NUMBER
Tapestri Instrument	191335
Tapestri Single-Cell DNA Cartridge Kit	046459
Tapestri Single-Cell DNA + Protein Core Kit	MB03-0034
Tapestri Single-Cell DNA Panel Kits	missionbio.com/panels
Tapestri Single-Cell DNA Custom Panel Kits	missionbio.com/panels/custom-panels/

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