tapestri

Tapestri Single-cell DNA Custom Panels

Uncover genotypic insights from single cells

The Mission Bio Tapestri® Platform leverages the patented two-step microfluidic workflow and proprietary multiplex chemistry to analyze SNVs, indels, CNVs, and translocations. Target up to 1,000 genomic regions to resolve the clonal heterogeneity of cancers or the performance of gene-editing protocols across thousands of single cells.

To design your panel, we provide our intuitive and easy-to-use Tapestri Designer software. Primer design algorithms and multiplex PCR biochemistry have been optimized for the Tapestri Platform, so you can be confident of high design coverage and high panel uniformity. Custom DNA panels can also be paired with custom oligo-conjugated antibodies to enable simultaneous detection of genotype and phenotype from the same cell for true single-cell multi-omics insights.

Key Features

- Optimized design parameters with high coverage and uniformity for the Tapestri workflow
- Support across the entire human, mouse, and other genomes
- Designed with the easy-to-use Tapestri Designer software

THE STREAMLINED TAPESTRI WORKFLOW

TARGET SELECTION → **SAMPLE PREP** → **LIBRARY PREP** → **SEQUENCING** → **PIPELINE** → **ANALYSIS**

TARGET SELECTION	SAMPLE PREP	LIBRARY PREP	SEQUENCING	PIPELINE	ANALYSIS
CHOOSE A PRE-DESIGNED OR CUSTOM DNA PANEL	ADD A PROTEIN PANEL AND SIMPLE CELL STAINING PROTOCOL	SINGLE WORKFLOW COMBINES DNA AND PROTEIN PANELS	SINGLE SEQUENCING RUN FOR MULTI-OMICS SINGLE-CELL DATA	INTEGRATED PIPELINE FOR MULTI-OMICS ANALYSIS	POWERFUL ANALYSIS AND VISUALIZATION SOFTWARE

CUSTOMIZABLE, TARGETED DNA PANELS WITH MAXIMUM FLEXIBILITY

Tapestri Single-cell DNA Custom Panels offer unprecedented flexibility by targeting your genes or regions of interest. Our design solution supports human, mouse, and other reference genomes for analysis of variant types including SNVs, indels, CNVs, and translocations. The panels also scale to support your project schedule and budget. Mission Bio's targeted chemistry is a practical solution for single-cell DNA sequencing, offering high resolution at a fraction of the cost of whole genome sequencing.

Recommended sequencing depth based on panel size and cell capture rate

(80x avg coverage per amplicon per cell and 2 x 150bp paired-end sequencing)

	Number of amplicons in panel		
	50	150	300
5,000 Cells	20M	60M	120M
10,000 Cells	40M	120M	240M

"As I want to maximize the data from a single cell sequencing study of rare patient samples, it is imperative that the targeted panel is built wisely. Tapestri Designer does just that - with an easy to use interface, and high coverage of my genomic regions of interest."

- Guy Ledergor, MD, PhD (UCSF Helen Diller Family Comprehensive Cancer Center)

QUICK AND EASY DESIGN WORKFLOW USING TAPESTRI DESIGNER

The intuitive interface of Tapestri Designer software allows you to complete custom designs in three easy steps. Start by entering your targets — you can use one of our pre-designed panels and modify as you need, or use your own target list and create a panel design from scratch. Second, review your the draft and delete or add targets according to your requirements. Lastly, submit the panel to obtain the custom design once it is ready.

1

ENTER TARGETS

Upload .CSV file or paste genomic targets for your genome.

2

REVIEW TARGETS

Add, remove, or edit targets and resolve any errors.

3

SUBMIT TARGETS

Submit your targets and your Single-cell DNA Custom Panel will be designed.

Simplified targeted DNA single-cell analysis

CONFIDENCE IN QUALITY AND PERFORMANCE

The Tapestri Designer software leverages decades of expertise in primer design algorithms and multiplex PCR biochemistry.

Researchers can expect the same high design coverage and panel uniformity that are typical of Tapestri Single-Cell DNA Catalog Panels (Fig. 1).

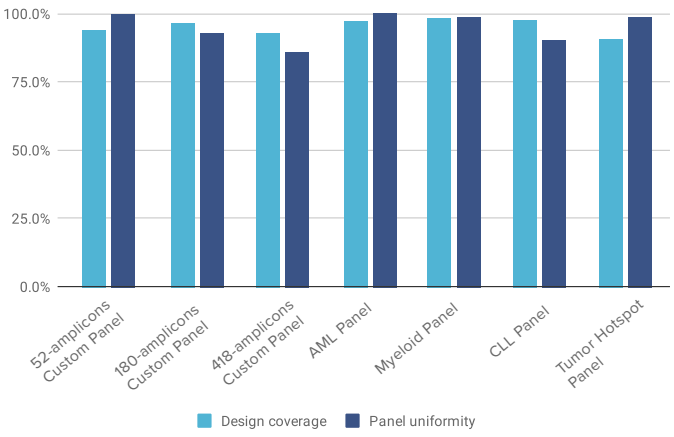

Figure 1. Observed panel performance for Tapestri Single-cell DNA Custom and Catalog Panels. Design coverage is percentage of targets designed of targets submitted. Panel uniformity is the percentage of targets that meet at least 20% of the average depth of coverage.

GET STARTED WITH TAPESTRI DESIGNER

To design a custom panel, start by submitting gene names, SNV IDs, or genomic coordinates to Tapestri Designer at designer.missionbio.com.

Tapestri Designer

- Creates human, mouse, or other reference genome designs from genomic coordinates
- Supports common database inputs such as COSMIC, HGVS, or dbSNP for hg19
- Leverages superior oligo design engine based on actual single cell wet-lab data and machine learning algorithm
- Supports key variant types in cancer research including SNVs, indels, translocations, gene-level or chromosome-level CNVs
- Includes technology support to help with panel selection, usage, or troubleshooting

CONTACT US TO LEARN MORE
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