tapestri

Tapestri® Single-Cell DNA Panels

CLONAL DIVERSITY REVEALED

Moving precision medicine FORWARD.

mission bio

Tapestri Single-Cell DNA Catalog Panels

Targeted Panels for Scalable Flexibility

Reveal clonal diversity with Tapestri Single-Cell DNA Catalog Panels. With novel droplet microfluidics to access DNA, we leverage proprietary primer design pipelines that are optimized with our unique biochemistry to design panels that barcode and target specific regions of interest.

With targeted SNVs, indels, CNVs, and LOH, sensitive detection of subclones is easier than ever with Tapestri Single-Cell DNA Catalog Panels. Targeting specific regions of the genome also allows the flexibility to tailor time and sequencing budget and capacity to the most relevant areas of heterogeneity for your research. Experiments are run and analyzed at a fraction of time and cost when compared to whole genome or whole transcriptome single-cell sequencing.

Whether identifying rare subclones missed by standard bulk sequencing, or identifying co-mutation patterns and zygosity in subclones, Tapestri Single-Cell DNA Panels can be applied across a wide number of high impact research and translational applications, including hematologic malignancies, solid tumor profiling, and genome editing programs.

Select from a menu of catalog panels, start with pre-designed content, or customize your own panels with Tapestri Single-Cell DNA Custom Panels. To browse current catalog panels and pre-designed content, or customize your own panel, visit Tapestri Designer (tapestridesigner.com).

Hematologic Malignancies

Clonal evolution is foundational to disease progression in hematologic malignancies which can impact therapy response, resistance, relapse, and residual disease. Tapestri Single-Cell DNA Panels for research in hematologic malignancies provide unprecedented resolution to understand tumor heterogeneity driving disease.

TAPESTRI SINGLE-CELL DNA AML PANEL

- Targets important hotspots across 20 genes implicated broadly in acute myeloid leukemia (AML).
- Designed to characterize clonal architecture of AML research samples.

20-GENE AML PANEL

ASXL1	GATA2	KIT	PTPN11	TET2
DNMT3A	IDH1	KRAS	RUNX1	TP53
EZH2	IDH2	NPM1	SF3B1	U2AF1
FLT3	JAK2	NRAS	SRSF2	WT1

TAPESTRI SINGLE-CELL DNA CLL PANEL

- Targets hotspots across a combination of 32 oncogenes and tumor suppressor genes with relevant mutations associated with chronic lymphocytic leukemia (CLL).
- Designed to characterize clonal architecture of CLL research samples.

32-GENE CLL PANEL

ATM	CD79B	EZH2	MED12	POT1	XPO1
BCOR	CHD2	FAT1	MYD88	RPS15	ZMYM3
BIRC3	CREBBP	FBXW7	NFKBIE	SETD2	-
BRAF	CXCR4	KRAS	NOTCH1	SF3B1	
BTK	DDX3X	LRP1B	NRAS	SPEN	-
CARD11	EGR2	MAP2K1	PLCG2	TP53	-

TAPESTRI SINGLE-CELL DNA MYELOID PANEL

- Targets hotspots across 45 genes implicated broadly in myeloid disorders.
- Designed to cover a comprehensive set of myeloid disorders including AML, myeloid dysplastic syndrome (MDS), myeloproliferative neoplasms (MPN), chronic myeloid leukemia (CML), chronic myelomonocytic leukemia (CMML), and juvenile myelomonocytic leukemia (JMML).

45-GENE MYELOID PANEL

ASXL1	DNMT3A	IDH2	MYD88	RAD21	TET2
ATM	ERG	JAK2	NF1	RUNX1	TP53
BCOR	ETV6	KDM6A	NPM1	SETBP1	U2AF1
BRAF	EZH2	KIT	NRAS	SF3B1	WT1
CALR	FLT3	KMT2A	PHF6	SMC1A	ZRSR2
CBL	GATA2	KRAS	PPM1D	SMC3	-
CHEK2	GNAS	MPL	PTEN	STAG2	-
CSF3R	IDH1	MYC	PTPN11	STAT3	-

Solid Tumor Profiling

Cellular heterogeneity in solid tumor cancers impacts clonal evolution and patient outcomes. Single-cell DNA solid tumor profiling enables high resolution of the genomic diversity in a variety of tumor types.

TAPESTRI SINGLE-CELL TUMOR HOTSPOT PANEL

- Targets hotspots across 59 oncogenes and tumor suppressor genes relevant in a range of different solid tumors with SNVs, indels, CNVs, and LOH detection.
- Universal nuclei isolation protocol works on many tissue types including (but not limited to) breast, lung, colorectal, prostate, brain, pancreas, liver, kidney.

59 GENES - TUMOR HOTSPOT PANEL

ABL1	CSF1R	FGFR1	IDH2	MLH1	RB1
AKT1	CTNNB1	FGFR2	JAK1	MPL	RET
ALK	DDR2	FGFR3	JAK2	MTOR	SMAD4
APC	EGFR	FLT3	JAK3	NOTCH1	SMARCB1
AR	ERBB2	GNA11	KDR	NRAS	SMO
ATM	ERBB3	GNAQ	KIT	PDGFRA	SRC
BRAF	ERBB4	GNAS	KRAS	PIK3CA	STK11
CDH1	ESR1	HNF1A	MAP2K1	PTEN	TP53
CDK4	EZH2	HRAS	MAP2K2	PTPN11	VHL
CDKN2A	FBXW7	IDH1	MET	RAF1	

Custom Panels

For maximum flexibility, use Tapestri Single-Cell DNA Custom Panels to easily tailor a panel to the most relevant genomic regions of heterogeneity for your research. With the simple and intuitive interface of Tapestri Designer, your custom design can be completed within minutes. 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.

PRE-DESIGNED CONTENT

To get you started we provide pre-designed content informed by research from The Cancer Genome Atlas and COSMIC database[1,2]. These include:

Hematology

- Acute lymphocytic leukemia
- Myeloproliferative neoplasms
- Diffuse large B-cell lymphoma
- Follicular lymphoma
- Mantle cell lymphoma
- T-cell lymphoma (all types)
- Chronic myeloid leukemia
- Multiple myeloma
- Classic Hodgkin's lymphoma
- Myelodysplastic syndromes
- Chronic myelogenous leukemia

Solid Tumor

- Breast invasive carcinoma
- Lung squamous cell carcinoma
- Colon adenocarcinoma
- Liver hepatocellular carcinoma
- Lung adenocarcinoma
- Ovarian serous cystadenocarcinoma
- Prostate adenocarcinoma
- Skin cutaneous melanoma
- Kidney renal clear cell carcinoma
- Pancreatic adenocarcinoma

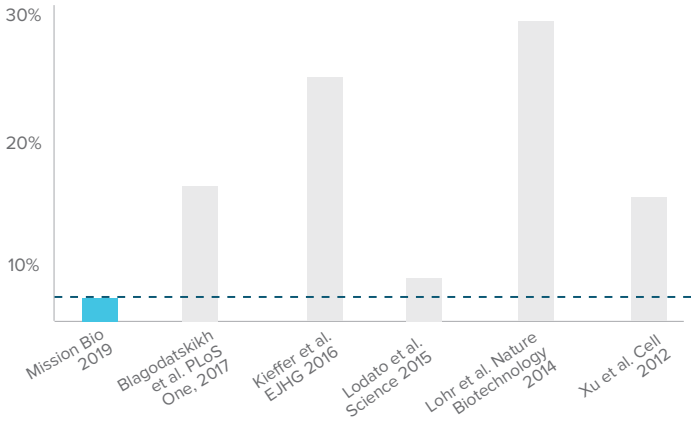
PANEL PERFORMANCE

- Tapestri Single-Cell DNA Catalog Panels achieve high panel uniformity
- Low allele dropout of <10% calculated using germline heterozygous SNVs

TAPESTRI SINGLE-CELL DNA CATALOG PANELS

	# genes	# amplicons	Target regions coverage (Kbp)	Panel Uniformity
AML Panel	20	127	~24	>90%
CLL Panel	32	274	~53	>90%
Myeloid Panel	45	312	~65	>90%
Tumor Hotspot Panel	59	244	~40	>80%

ALLELE DROPOUT RATE



PANEL	PART NUMBER
Tapestri Single-Cell DNA AML Panel Kit	MB03-0016
Tapestri Single-Cell DNA CLL Panel Kit	MB03-0019
Tapestri Single-Cell DNA Myeloid Panel Kit	MB03-0017
Tapestri Single-Cell DNA Tumor Hotspot Panel Kit	MB03-0018
Tapestri Single-Cell DNA Custom Panel Kits	missionbio.com/panels/custom-panels

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[1]Bailey et al., Comprehensive Characterization of Cancer Driver Genes and Mutations. Cell, 173(2): 371-385 (2018)
[2]Liu et al. An Integrated TCGA Pan-Cancer Clinical Data Resource to drive high quality survival outcome analytics. Cell, 173(2): 400-416 (2018)