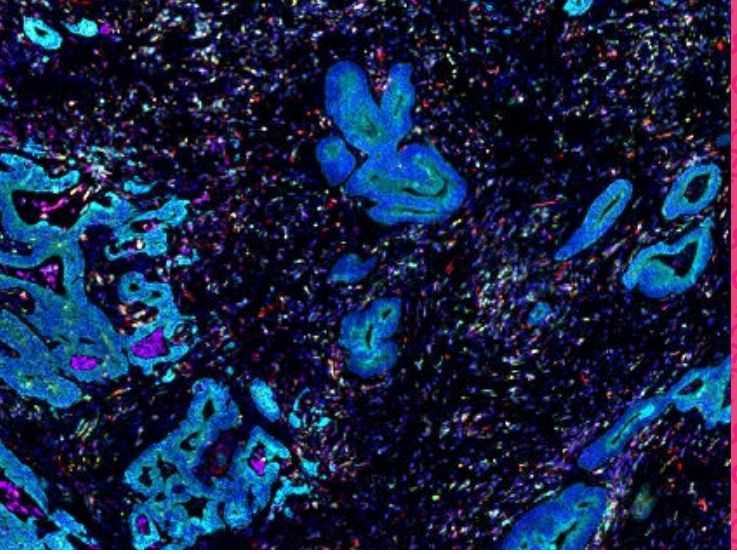


Why Choose a Pre-designed Panel?

Fast. Reliable. Ready-to-Run.

Our Pre-designed Panels put expert-validated gene content at your fingertips, so you can focus on your science, not panel design.

Focus on Biology, Not Panel Design

Our panels are expertly curated around key biological themes - oncology, neuroscience, immunology and more. Ensuring the inclusion of the most relevant marker genes and pathways to support your research goals.

Start Experiments Sooner

Skip the time-consuming design process. Our Pre-designed Panels are validated and ready-to-run, accelerating your path from concept to data.

Flexibility with Custom Add-on Panels

Expand any Pre-designed Panel with up to 100 additional genes tailored to your research question with the performance and reliability of a validated panel design.

Optimized for Performance

Built and validated for maximum performance on the MERSCOPE Ultra™ Platform, these panels deliver robust, high-quality data, minimizing signal noise and maximizing transcript detection.

Standardize Across Labs

Enable cross-study and multi-site comparability with a shared, standardized gene list that minimizes variability and ensures consistent, reproducible results.

Cost-Effective and Scalable

With no custom design or validation costs, pre-designed panels offer a cost-efficient solution for both pilot studies and large-scale projects.

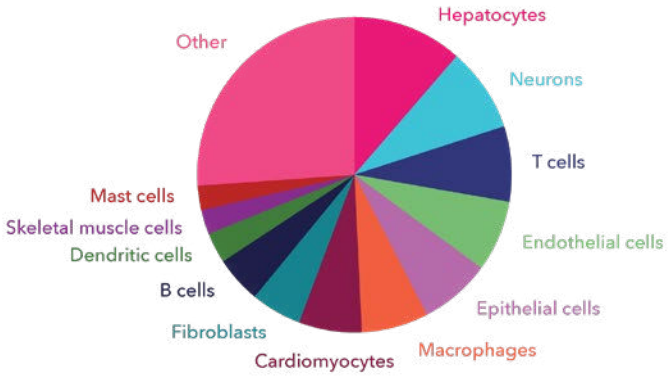
vizgen®

MERSCOPE Pre-designed Panels for spatial transcriptomics across oncology, immunology, tissue biology, and translational mouse models.

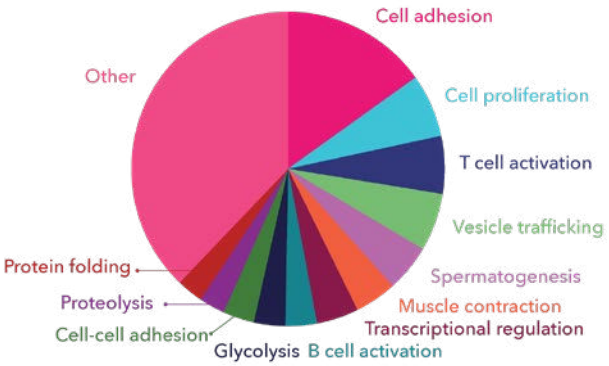
Pan Human Pre-designed Panel

The **Pan Human Pre-designed Panel** delivers broad, ready-to-run coverage of human cell types and core biological pathways in a single experiment, eliminating the need for custom panel design. Built for versatility, it enables high-value spatial insights across tissues, biological systems, and added back disease contexts, making it an ideal starting point for discovery, translational studies, and platform expansion.

Cell type marker distribution
N = 479 of 815 genes



Pathway distribution
N = 185 of 815 genes

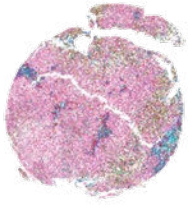


Pan Human Panel shows immune infiltration in liver cancer vs normal

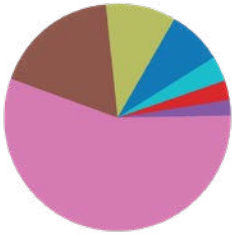
Cell-type composition of healthy control and cancerous liver tissue

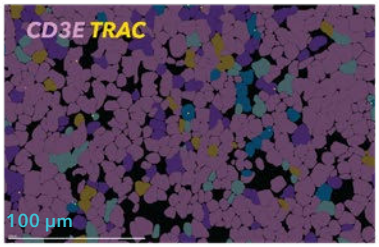
Greater immune infiltration observed in cancer tissue

Healthy Control Liver



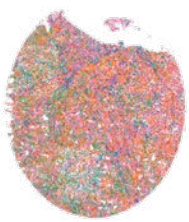
Sinusoidal cells	9.9%
Antigen-presentig cells	7.9%
T cells	3.4%
Endothelial cells	2.9%
Fibroblasts	2.3%
Normal hepatocytes	55.6%
Macrophages	18.0%



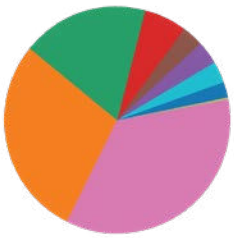


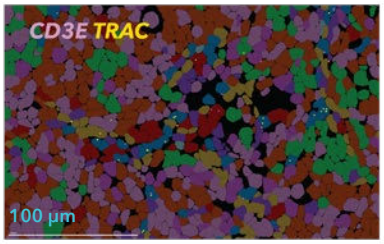
Normal hepatocytes, T cells

Liver Cancer



Cancer cells FGFR2+	18.2%
Endothelial cells	5.9%
Macrophages	3.3%
Fibroblasts	3.3%
T cells	3.0%
Antigen-presentig cells	2.2%
Sinusoidal cells	0.2%
Normal hepatocytes	35.3%
Cancer cells AFP+	28.3%

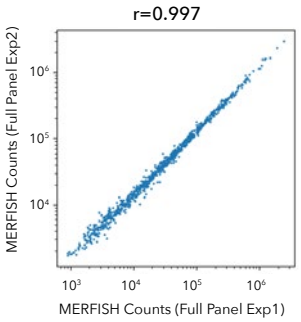




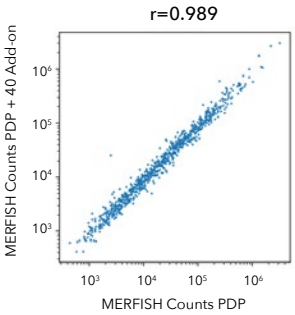
AFP+, FGFR2+ cancer cells, T cells

The Pan Human Pre-designed Panel, combined with an oncology-focused Add-on Panel, delivers targeted specificity with the reproducibility required for confident spatial analysis.

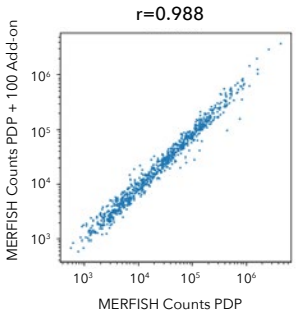
Base panel technical replicates



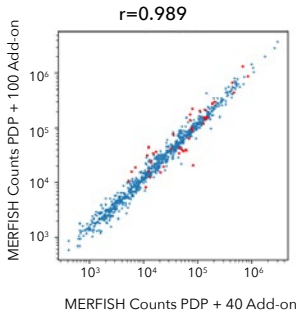
Base panel vs Base + Add-on 40 genes



Base panel vs Base + Add-on 100 genes



Base panel Add-on 40 genes vs Base + Add-on 100 genes



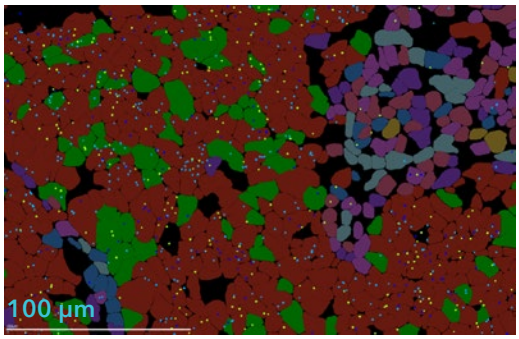
Dots show concordance of expression across experiments. Blue dots represent the base Pre-designed Panel genes, red dots represent the Add-on Panel genes.

From cancer cell atlasing to drug targets

Pairing the Pan Human Pre-designed Panel with an oncology-focused Add-on Panel resolves cancer cell populations across tissues and surfaces clinically validated, druggable targets within cancer-associated pathways.

Non small cell lung cancer

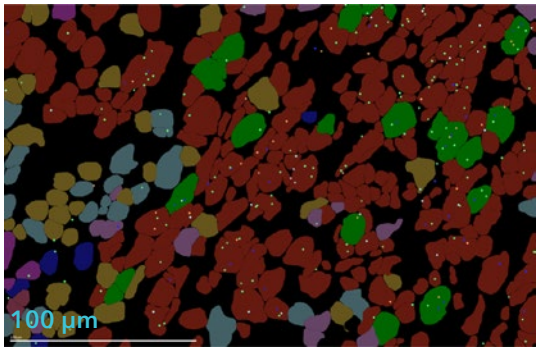
FGFR1, FGFR2, SMARCA4



Lung Cancer cells, Cycling cancer cells

Melanoma

RAF, MAP2K2, MAPK1, AKT2, AKT3



Melanoma Cancer cells, Cycling cancer cells

MERSCOPE Pre-designed Panels

Mouse Panels

Spatial profiling of mouse tissues and biological systems for translational research

- Pan Neuro
- Pan Mouse
- ImmunoOncology
- Liver
- Kidney
- Cardiovascular
- Lung
- Transcription Factor A
- Transcription Factor B

Human Biology Panels

Spatial profiling of human tissue biology, pathways and physiological systems

- Brain
- Human
- Metabolic
- Inflammation
- Cardiovascular

Human Oncology Panels

Spatial profiling of tumor biology and microenvironment across human cancers, enabling comparison to healthy controls

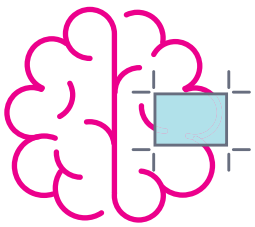
- ImmunoOncology
- Breast Cancer
- Colon Cancer
- Lung Cancer
- Liver Cancer
- Kidney Cancer
- Skin Cancer

MERSCOPE Pre-designed Panels

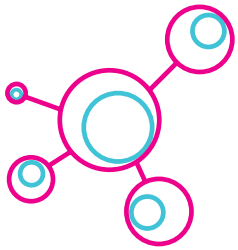
Base MERFISH Genes	815 Genes
Species availability	Human & Mouse
Add-on Panel compatible	Up to 100 MERFISH and 6 smFISH genes
Validated for cell atlasing	✓
Exogenous sequence compatible	✓
Cell Boundary Stain compatible	✓
Protein Stain compatible	Co-detect up to 5 proteins
Small Scale Capacity	4 Standard or 2 Large Slides
Large Scale Capacity	10 Standard or 5 Large Slides

Save on Custom Design Time & Costs.
Compatible with both FFPE and Fresh Frozen Formats.

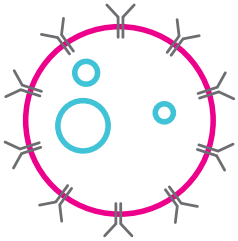
[Applications]



Organ & Tissue Atlasing

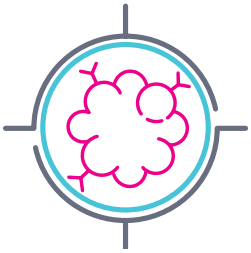


AI & Foundational Model Training

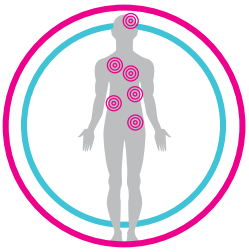


Treatment Response Characterization

Experimental & Predictive Model Validation



Biomarker Discovery & Development



Drug Target Identification & Validation

Contact us to learn more.
info@vizgen.com

Don't see a gene panel that fits your research?

We can custom-design a panel tailored to your specific research needs. Contact us today to discuss your project and explore a panel designed around your biology.