

# Spatial Gene & Protein Expression

## UNLOCK THE POTENTIAL OF YOUR TISSUE SAMPLE

**AcelaBio** applies its specialty histology expertise to deliver GCP/GCLP compliant end-to-end spatial gene and protein expression workflows, leveraging 10X Genomics Visium and Xenium platforms.

Our seamless, high-quality process from wet lab to dry lab translates your samples into meaningful biomarker insights.

### SAMPLE FLEXIBILITY

Analyze **FFPE** or **frozen tissue** from any tissue type

### FULL TISSUE COVERAGE

No need to **identify** regions of interest

### CUSTOMIZABLE WORKFLOW

**H&E** and/or **IHC/IF** in combination with spatial data

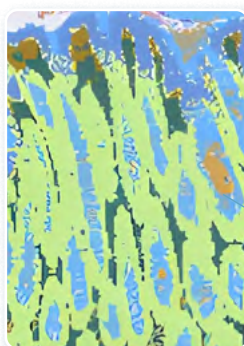
## OUR SPATIAL BIOLOGY ENABLED LAB

Visium v2



Profile the whole transcriptome with morphological context

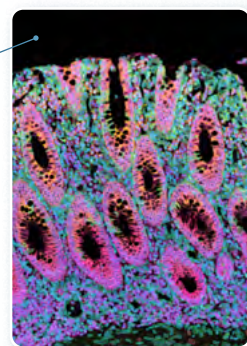
Visium HD



High-plex in situ RNA and Protein profiling with sub-cellular resolution

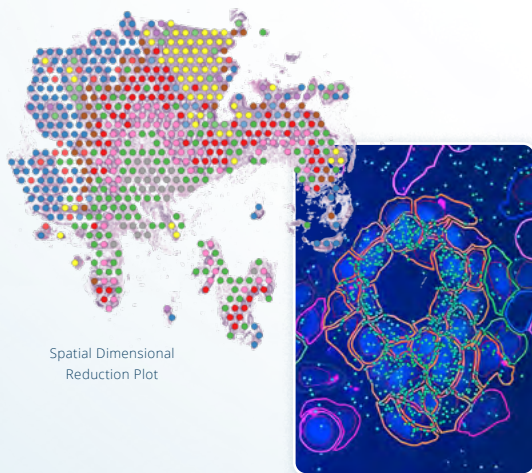
Map the whole transcriptome at single-cell scale resolution

Xenium



## DATA ANALYSIS SOLUTIONS

Data analysis visualizations and interpretation of 10x spatial experiments is a multi-step process that utilizes state-of-the-art bioinformatic & machine-learning approaches to **dive deep into your data.**



Spatial Dimensional Reduction Plot

In Situ Transcripts and Cell Segmentation

### Basic Analysis

Quality control and pre-processing to ensure data meets our quality standards and is ready to proceed through our validated pipelines

### Standard Analysis

Explore spatial gene and protein data customized to your research questions:

- Classify cell clusters
- Identify & visualize cell type composition & cluster

- Specific gene expression changes
- Spatially map the most highly regulated genes
- Pathway enrichment analysis

### Deluxe Analysis

Going beyond standard analysis, we dive deeper into data to gain meaningful insights. Analyses can include:

- Cell or tissue feature annotations
- Integration with curated datasets
- Exploration of cellular niches

# Multiplexed Immunostaining & Digital Image Analysis

State-of-the-art CAP/CLIA-accredited  
**specialty histopathology laboratory**



Seamless end-to-end  
wet-lab-to-dry-lab  
workflows



Development and validation  
of assays for novel or existing  
protein/mRNA biomarkers

**100,000+** tissue  
samples analyzed

**95+** clinical trials

## IMMUNOSTAINING

### PRE-ANALYTICAL SERVICES

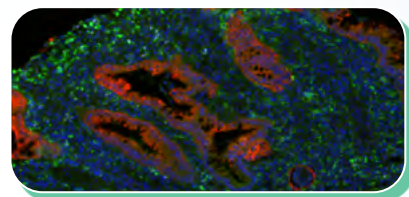
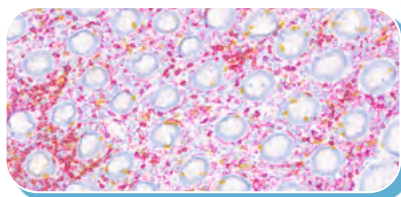
- Sample logistics, accessioning, storage & archiving
- Tissue processing, embedding, sectioning

### ASSAY DEVELOPMENT

- Select high-quality antibodies, control tissue/cells & experimental conditions
- US-board-certified pathologist oversight
- Assay precision, specificity & reproducibility

### WHOLE SLIDE IMAGING

- 510(k) approved scanner
- Brightfield and IF



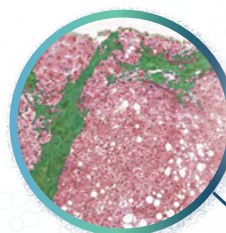
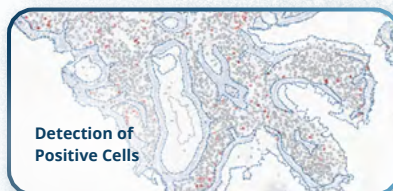
### IMMUNOSTAINING ASSAYS

- **Stains:** Hematoxylin & eosin (H&E), Masson trichrome, Picosirius red
- **Immunohistochemistry:** Single or chromogenic multiplex (up to 4 markers)
- **Immunofluorescence:** Single or ultra-sensitive mIF (up to 8 markers)
- In situ hybridization (ISH) of mRNA
- Suite of validated single and multiplexed assays available
- Roche Discovery Ultra and BenchMark Ultra Plus for immunoassays

## DIGITAL IMAGE ANALYSIS

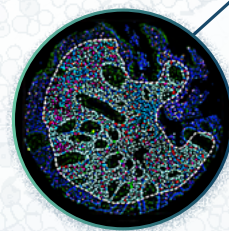
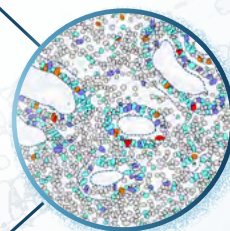
Using advanced **AI and deep-learning-based digital image analysis**, we address complex scientific questions by developing APPs to **quantify IHC/IF tissue biomarkers**

- Validated DIA workflows from image QC to quantitative outputs
- Generate reproducible data on whole slide images of histopathological tissue sections



SEAMLESS END-TO-END  
IMMUNOSTAINING AND  
DIGITAL IMAGE ANALYSIS  
WORKFLOWS

GROWING  
VALIDATED APP  
CATALOG



CUSTOM APP  
DEVELOPMENT  
WITH OVERSIGHT  
OF EXPERT  
PATHOLOGISTS



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