

Advance your spatial biology research



At Pharmagene® Discovery Services, we specialise in delivering high-quality, human tissue-based spatial biology solutions — from single biomarker evaluation to advanced multiplexed analyses that reveal complex cellular interactions and spatial relationships within tissue microenvironments.

Our scientific expertise, flexible assay design, and advanced image analysis capabilities enable us to deliver biologically relevant, data-driven solutions that support target and biomarker validation, improve understanding of disease mechanisms, prevalence, and the impact of treatment, and accelerate translation into the clinic.

How we support your research

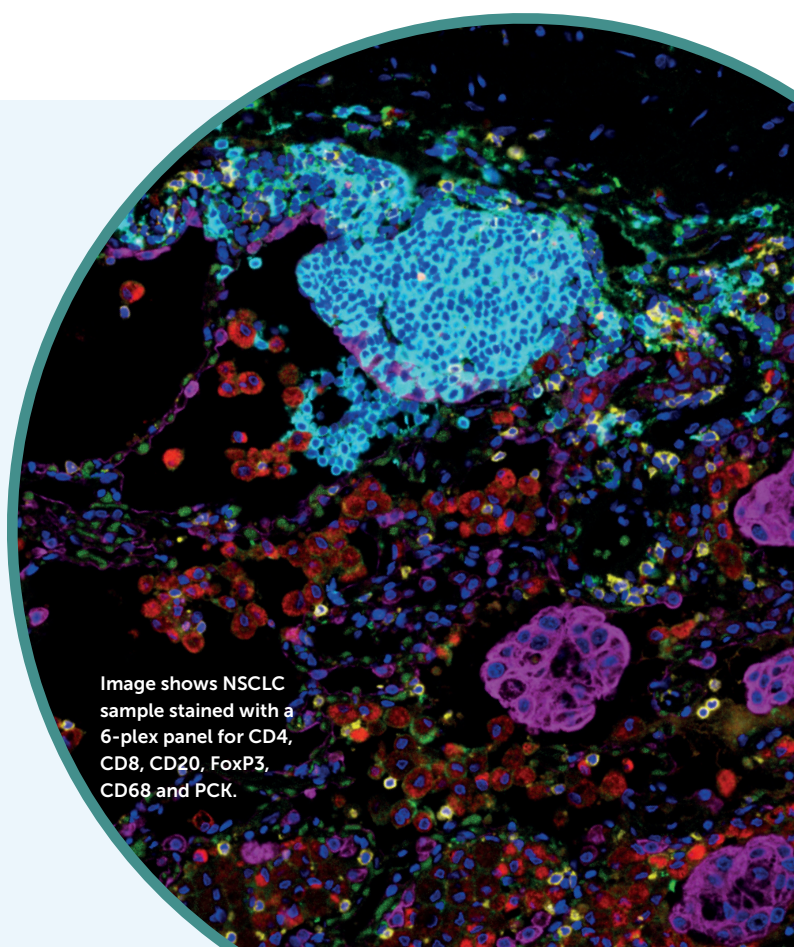
Our team has extensive experience designing and executing assays using a wide range of industry-leading spatial biology techniques and technologies including:

- **Fluorescent immunohistochemistry (multiplex immunofluorescence (mIF)):** Simultaneous detection of up to eight protein targets, with DAPI nuclear counterstaining, in a single FFPE tissue section
- **Fluorescent *in situ* hybridisation (ISH):** Multiplex detection of up to six RNA targets, with DAPI counterstaining, in a single FFPE tissue section
- ***In Situ* Proximity Ligation Assay (isPLA):** To interrogate protein-protein interactions (PPIs) and post-translational modifications and support antibody validation
- **Multiomic assays:** Integrated analysis combining detection of PPIs, protein expression, and mRNA targets within the same tissue

Technology	Provider
Classic OPAL™ mIF*	Akoya Biosciences / Quanterix®
PhenoCode™ Signature mIF	Akoya Biosciences / Quanterix
InSituPlex® mIF	Ultivue / Vizgen
RNAscope™ ISH	Bio-Techne
Naveni® isPLA	Navinci®
ProximityScope™ PLA*	Bio-Techne
RNAscope Multiomic LS (mIF + ISH)*	Bio-Techne

*Combination of RNAscope Multiomic LS with Classic OPAL™ mIF and/or ProximityScope™ PLA available as a service from Pharmagene.

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Custom multiplex panel development

We develop biologically relevant, tailored multiplex panels designed around your specific research objectives. Our capabilities include:

- Flexible, collaborative assay design
- Selection and optimisation of the most appropriate primary antibodies for every target
- Over 40 panels developed covering immune-oncology, fibrosis, and autoimmune
- Tissue microenvironment immunophenotyping
- Assessment of immune checkpoint markers and TIL status
- Evaluation of ECM/remodelling, T/NK cell regulation and epithelial biology

PID	Panel	Targets
1021	CD4, CD68, CD8, FOXP3, PD-L1, SOX10	6 Proteins
1022	CD4, CD45, CD8, GRANZYME B, INF GAMMA, PD-L1	6 Proteins
1023	CD3, CD68, FOXP3, Ki67, PD1, RNA A	1 RNA and 5 Proteins
1024	CD163, CD31, CD68, COLLAGEN I, COLLAGEN III, ELASTIN, VIMENTIN	7 Proteins
1025	TARGET A, TARGET B, CD3, EPCAM	4 Proteins
1026	CD138, CD20, CD4, CD8, MYELOPEROXIDASE	5 Proteins
1027	CD177, CD68, CD8, DCR3, LIGHT	5 Proteins
1028	CCR7, CD4, CD45RO, CD56, LIGHT	5 Proteins
1029	CD4, CD68, CD8, FOXP3, PCK, PD-L1	6 Proteins
1030	CD3, CD8, GRANZYME B, Ki67, PCK	6 Proteins
1031	A2AR, CD11C, CD123, CD19, CD3, CD38, TARGET A, PCK	8 Proteins
1032	CD31, COLLAGEN I, COLLAGEN III, ELASTIN	4 Proteins
1033	AQP3, FIBRILLIN, HAS1, Ki67, MMP1, MMP12, VERSICAN	7 Proteins
1034	CD11B, CD4, CD8, FOXP3, Ki67, PD1	6 Proteins
1035	CD11B, CD11C, CD3E, F4/80, LY6C, LY6G	6 Proteins
1036	CD123, CD33, CD4, CD8, GRANZYME B, INF GAMMA, PD1, TARGET A	8 Proteins
1037	B-CATENIN, CD11C, CD20, DAPI, HLA, PD-L1, SOX10	6 Proteins
1038	B7H3, B7H4, PCK	3 Proteins
1039	CDH17, ERBB2, TARGET A	3 Proteins
1040	CD8, IL10RA	2 Proteins
1041	FOXP3, IL10RA	2 Proteins

Expertise in quantitative image analysis using HALO® (Indica Labs)

- Tissue classification
- Immunophenotyping: Average intensity, counts and percentages
- Spatial analysis: Immunophenotype density heatmaps, infiltration, nearest-neighbour and proximity

Trusted multiplex immunofluorescence partner

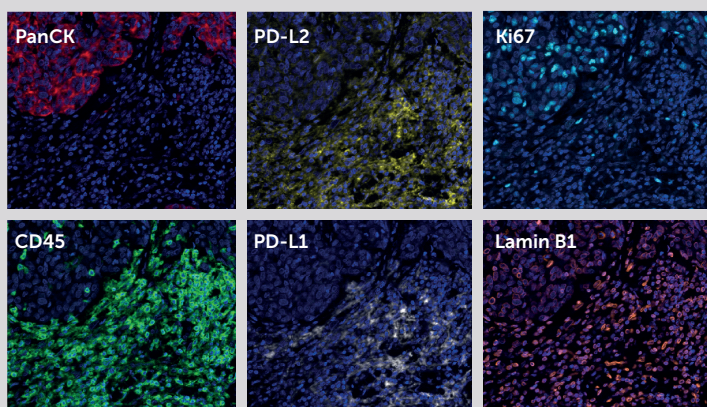
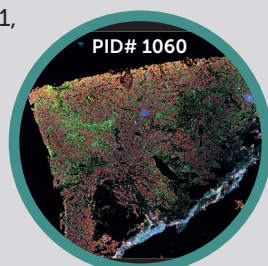
Pharmagene is recognised by Quanterix as a Qualified CRO Service Provider for mIF and by Navinci as a Trusted CRO Service Partner for *isPLA*, demonstrating our dedication to using advanced technologies for precise and efficient tissue profiling.

PID	Panel	Targets
1042	TYRP1, CD146	2 Proteins
1043	CD56, CD8, DNAM2, FOXP3, PVRI, TARGET A	6 Proteins
1044	CBLC, CD56, CD8, DNAM1, FOXP3, PVRI	6 Proteins
1045	CD68, EPCAM, PD-L1, PVR, PVRL2	5 Proteins
1047	CD20, CD3, CD68, CD8, FOXP3, Ki67, PCK, PD1	8 Proteins
1048	CD4, CD8, DAPI, FOXP3, PCK, PD-L1, VWF	6 Proteins
1049	CD4, CD68, CD8, FOXP3, Ki67, PCK, PD-L1	6 Proteins
1050	CD20, CD3, CD4, CD68, CD8, FOXP3, PD-L1, SOX10	8 Proteins
1051	E-CADHERIN, VIMENTIN	2 Proteins
1052	EGFR, EPHA	2 Proteins
1053	PVR/CD155, TARGET A	2 Proteins
1054	PVRL2/CD112, TARGET A	2 Proteins
1055	CD3, CD45RO, DNAM1, TIGIT	4 Proteins
1056	CD20, CD4, CD68, CD8, FOXP3, PCK	6 Proteins
1057	CD3, CD8, FOXP3, Ki67, PD1, SOX10	6 Proteins
1058	CD3, CD8, FOXP3, Ki67, PCK, PD1	6 Proteins
1059	CD163, CD20, CD4, CD8, FOXP3, PCK	6 Proteins
1060	CD45, Ki67, LAMIN B1, PCK, PD-L1, PD-L2	6 Proteins
1061	PD-1/PD-L1 INTERACTION, PD-L2 mRNA, CD3, CD68, FOXP3, PCK	1 PLA, 1 mRNA and 4 Proteins
1062	COLLAGEN I AND ELASTIN mRNA, CD68, Ki67, PCK	2 mRNAs and 3 Proteins

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Example data: Custom panel #1060

Breast Carcinoma sample stained with customised 6-plex (with DAPI nuclear counterstaining) panel for the detection of: Ki67, Lamin B1, CD45, PD-L1, PD-L2, PanCK.



Partner with us to accelerate your spatial biology research — from study design to data delivery. Contact our team to discuss your project requirements.

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