CosMx™ Universal Cell Characterization RNA Panel

Profile expression of 1000 transcripts with subcellular resolution

Elevate single-cell research through comprehensive analysis of metabolism, circadian rhythm, antigen presentation, damage, activation, checkpoints, inflammation, proliferation, secretion, stress-response, wound healing and much more.

Product Highlights

- Profile expression of 1000 curated RNA targets plus additional protein markers for cell segmentation
- Customizable with up to 50 additional RNA targets of interest
- Fully validated to enable robust tissue mapping, cell typing, and analysis of cell states and interactions
- Compatible with a wide range of tissues and solid tumors
- Available for human or mouse samples

The first fully-integrated single-cell spatial biology solution

High Plex Panels

More cell types, cell states and biological pathways

Multiomic

One system for RNA and protein

Any Sample Type

Real-world FFPE, fresh frozen, TMA, organoids and more

High Resolution

Single-cell analysis at subcellular resolution

Simple and Flexible

East-to-use workflow with customizable panels and scan area

AtoMx™ Spatial Informatics Platform

An integrated informatics solution, AtoMx SIP enables scanable data analysis, storage, and sharing

CosMx Universal Cell Characterization RNA Assay Design

The tables below summarize the different categories of gene content represented in the panel, as qualified through biostatistical approaches and selected literature in the field of comparative canine oncology.

Cell Typing	Includes "Cell Typing" genes that help discriminate cells in the data analysis tool, and "Cell Type Associated" genes that are common markers of key cell types that can assist in confirming cell identity.

Cell State & Function		
Angiogenesis	EMT	Lysosome
Apoptosis	Epigenetic Modification	Mitochondrial
Autophagy	Glycolysis & Glucose Transport	Metabolism/Mitochondrial Metabolism/TCA
Cell Adhesion & Motility	GPCRs	Neutrophil degranulation
Cell Cycle & Proliferation	Immortality & Stemness	NK Cell Activity
Cellular Stress	Inflammation	Oxidative Stress
Circadian Clock	Interferon Response Genes	Pattern Recognition Receptors
Collagen	Kinases	Proteases
Cytoskeleton	Lipid Metabolism	Proteotoxic Stress
Cytotoxicity	Lymphocyte Regulation	Senescence
Differentiation	Lipid Metabolism	T cell Exhaustion
DNA Damage Repair	Lymphocyte Regulation	Transcription Factors

Signaling Pathways & Target Genes	
BCR	mTOR
EPH-Ephrin	PI3K-Akt
Hedgehog	TCR
HIF1	TGF-beta
Insulin	TLR
Interferon Response Genes	TNF
JAK-STAT	Type I Interferon
MAPK	VEGF
MAPK Targets	Wnt

Cell-Cell Interaction
Antigen Presentation
CD Molecules
Cytokines & Chemokines
GPCRs
Receptor Ligands
T Cell Checkpoints
Pattern Recognition Receptors
Receptor Ligands

	Signaling Pathways & Target Genes	
Hormone Activity	Androgen Signaling	Hormone Processing
	Estrogen Signaling	Hormone Receptors
	Insulin Signaling	Hormones

Validated Assay Ready for Use

Discover Spatial Single Cell Applications

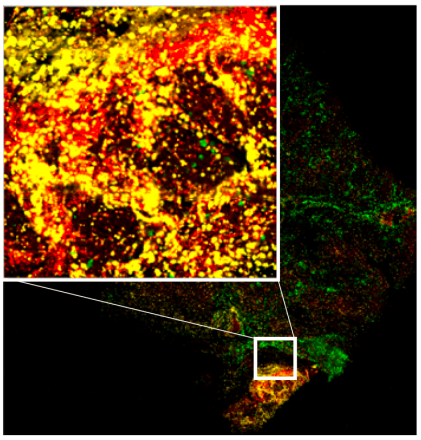
Start with Foundational Scientific Knowledge

Integrate State of the Art Bioinformatics Databases

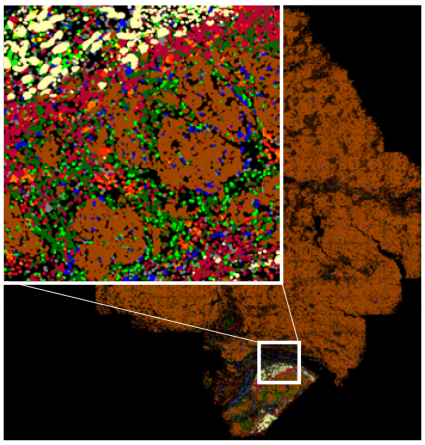
Leverage Key Single Cell Reference Datasets

Develop Powerful and Simple Data Analysis Tools

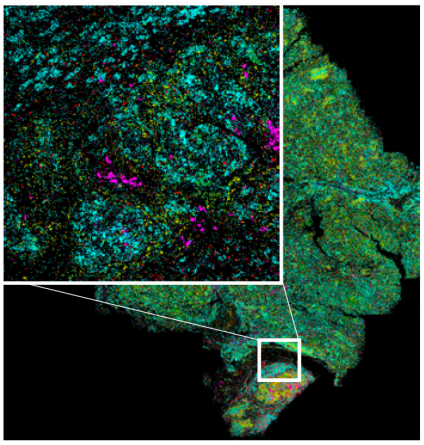
Applications



Human
Upfront segmentation marker staining



Human
Cell typing correlates with immunostaining



Human
CosMx detection of genes of interest in liver cancer

Bruker Spatial Biology | nanostring.com/CosMx1K

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