



VistaProX

Spatial Proteomics Visualization Platform

> Product Introduction

VistaProX enables **10+1-color whole-slide tissue imaging**, **spectral unmixing for multiplex fluorescent staining**, and **high-precision cell identification & isolation at single-cell resolution**.

The platform addresses critical drawbacks of conventional multichannel fluorescence imaging, including spectral crosstalk that impairs quantitative detection of multicolor samples, as well as the instability and low recovery rates during single-cell extraction of individual cells from tissue sections. VistaProX enables precise, quantitative single-cell analysis of multi-target tissue microenvironments in situ, together with **100% capture and collection of target single cells**.

By integrating localization, qualitative phenotyping, quantitative analysis, and precise in situ isolation across multiple dimensions—including individual cells, tissue architecture, and spatial cellular information—VistaProX lays a rigorous, high-fidelity foundation for downstream genomic, proteomic, and multi-omics molecular research.

> Key Features

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|---|--|---|--|
|  | High-speed continuous full-spectrum scanning & spectral unmixing |  | Proprietary sandwich-format sample preparation, fully contamination-free |
|  | Multi-mode imaging optimized for high throughput and diverse research applications |  | Subcellular-resolution microscale laser microdissection |
|  | AI-driven intelligent cell boundary segmentation |  | 100% capture and collection of target cell samples |
|  | Region-of-interest (ROI) cell purity quantification |  | AI-powered panoramic in situ quantitative analysis |



Materials



LinkedIn

Shenzhen BayOmics Biotechnology Co., Ltd

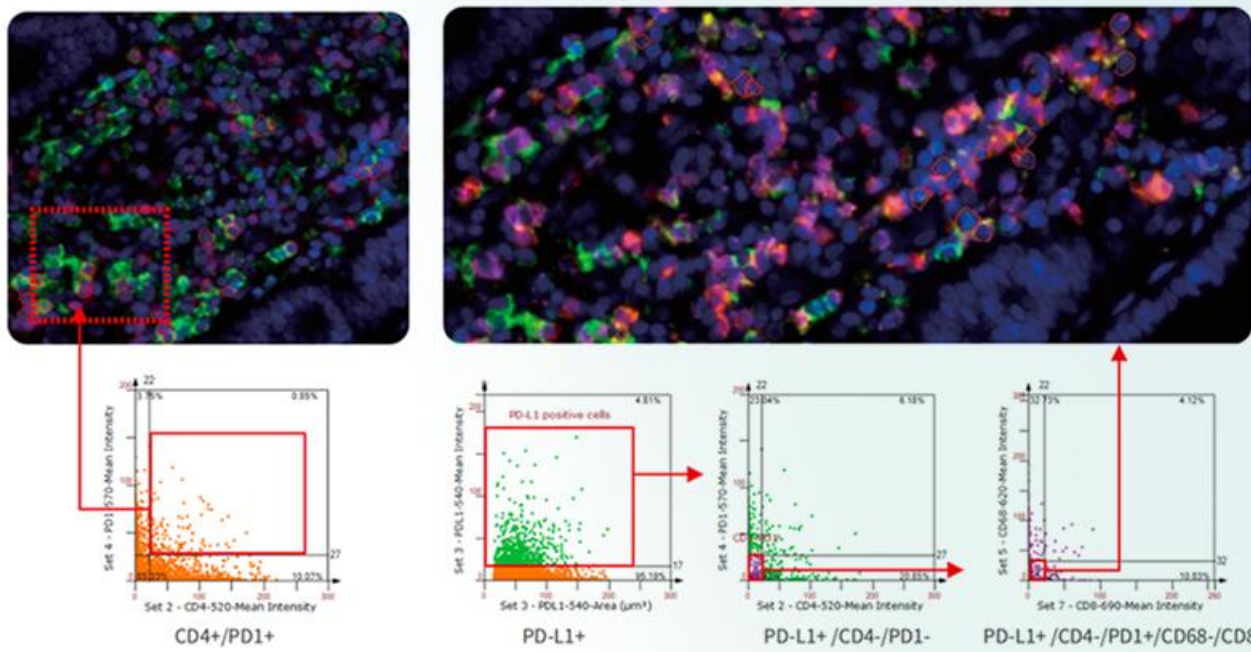
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> AI-Powered Panoramic In Situ Quantitative Analysis

VistaProX features a unique **in situ single-cell flow cytometry-like scatter plot analysis** capability. Following targeted cell identification and subcellular localization of protein staining across different fluorescence channels, multiple cellular characteristics—including staining intensity, area, and morphology—can be projected onto two-dimensional scatter plots.

Using gating tools, individual cellular phenotypes can be analyzed step by step. Within a single scatter plot, cells can be simultaneously classified into positive and negative populations, as well as populations co-expressing multiple proteins.

Combined with multiplex tissue staining technologies, VistaProX ultimately enables precise in situ quantitative analysis of **an unlimited number of cellular phenotypes** within their native biological context.

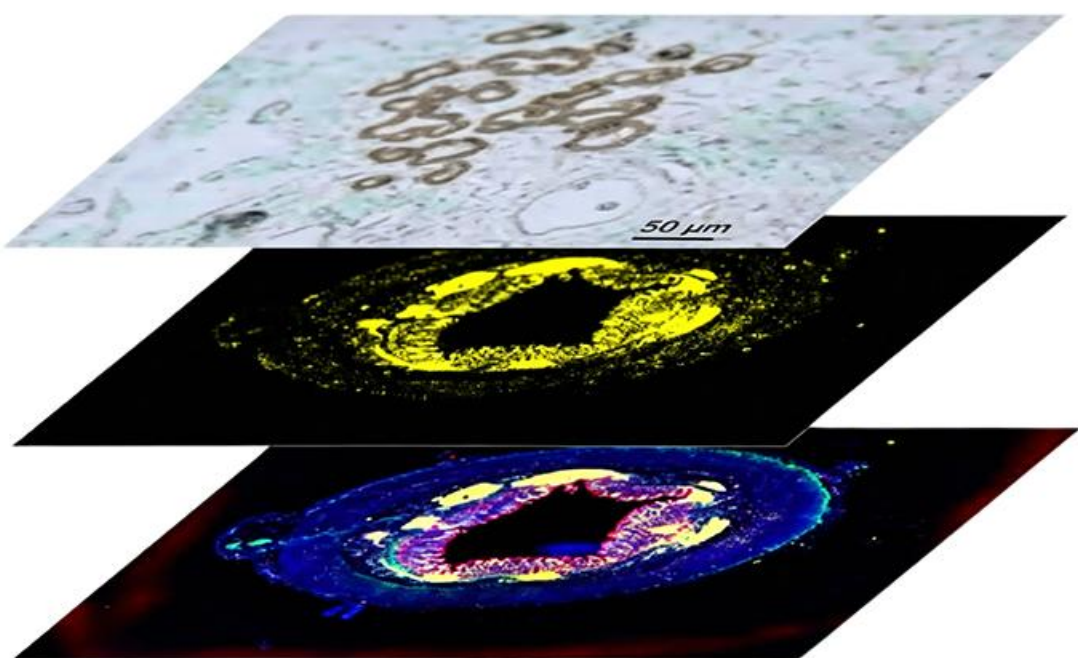


> Fully Automated Laser Microdissection for Precise In Situ Capture

VistaProX employs a proprietary “**sandwich**” **sample preparation method**, in which the specimen is protected between the glass slide and membrane. This configuration minimizes contamination during sample transfer and microdissection while reducing sample degradation caused by prolonged exposure to the surrounding environment.

Its active adhesion-based collection method eliminates the need for harsh laser ablation / mechanical dissection, enabling gentler isolation and minimizing sample damage. This approach significantly improves sample collection efficiency.

The entire sample collection process is **fully automated and software-controlled**, providing precise and efficient in situ capture of target samples.



> Project Article

Title	Journal Name	Published Date
Deep Visual Proteomics maps proteotoxicity in a genetic liver disease	Nature	2025
Deciphering functional tumor-immune crosstalk through highly multiplexed imaging and deep visual proteomics	Molecular Cell	2025
A new understanding of tissue biology from MS-based proteomics at single-cell resolution	Nature Methods	2025
Clinical functional proteomics of intercellular signalling in pancreatic cancer	Nature	2024
Spatial proteomics identifies JAKi as treatment for a lethal skin disease	Nature	2024
Multimodal single cell-resolved spatial proteomics reveal pancreatic tumor heterogeneity	Nature communications	2024