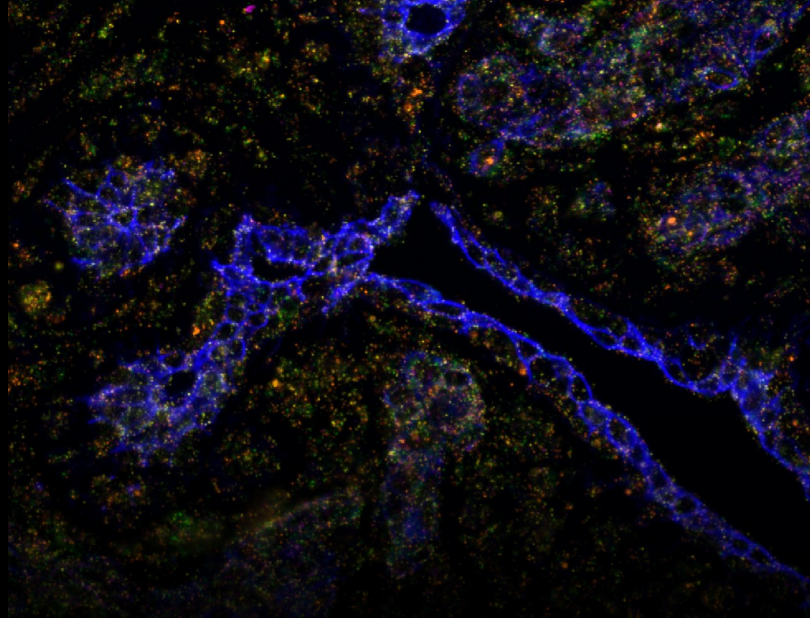


Automated multiomics on COMET™



An end-to-end platform to perform same-section, spatial RNA and protein detection with subcellular resolution

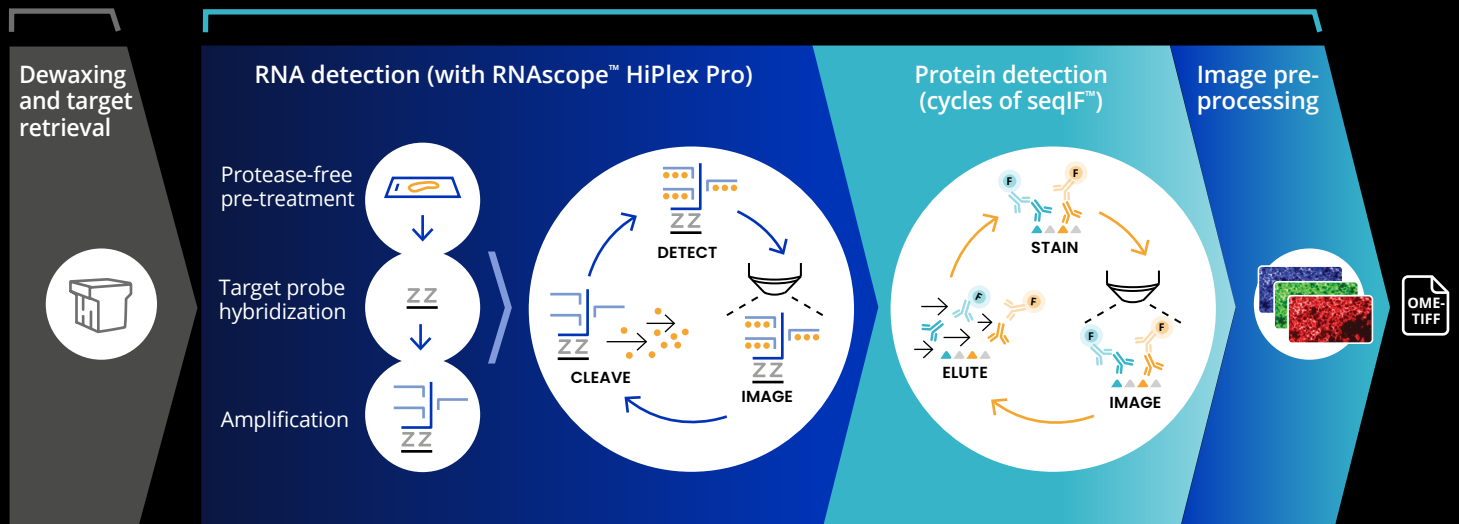
With the multiomics application on COMET™, you can detect RNA and protein simultaneously on the same tissue section using **RNAscope™ HiPlex Pro** and off-the-shelf, **non-conjugated primary antibodies**. The highly specific and sensitive detection of both RNA and protein targets achieved with spatial multiomics on COMET™ provides valuable scientific insights through biomarkers that can be spatially resolved at the single cell-level. The streamlined, automated workflow ensures reproducibility and saves time in assay development and execution.

Protease-free, fully automated multiomics

COMET™ multiomics enables same-section, spatial RNA and protein analysis on up to 4 slides in the same run. A fully automated workflow from target probe hybridization to imaging, requiring no user intervention, facilitates a deeper understanding of cellular processes and disease mechanisms. The workflow includes an optimized target retrieval step and a protease-free pretreatment to maximize RNA and protein target detection as well as epitope unmasking while preserving tissue morphology.

RNA targets	9-12-plex RNA	5-8-plex RNA	1-4-plex RNA
Protein targets	24-plex protein	26-plex protein	28-plex protein

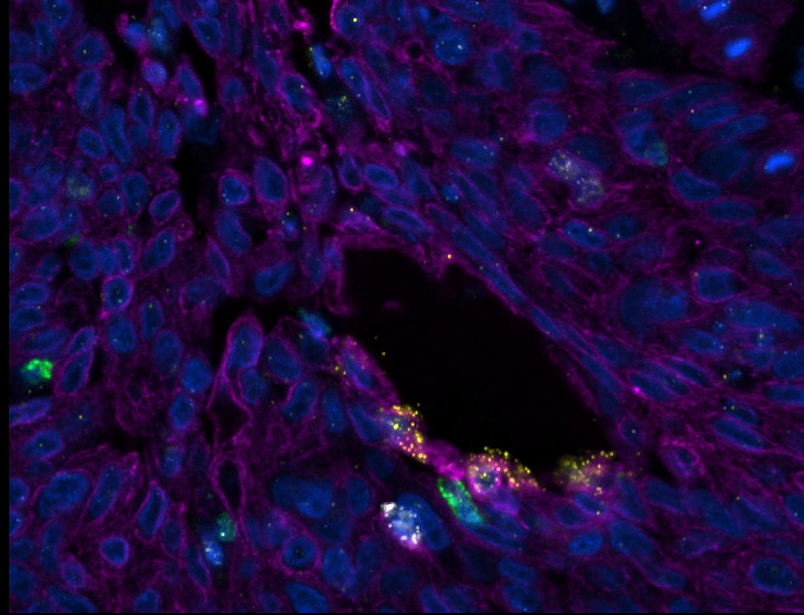
Manual pre-processing  **Processing on COMET™: click "start" and walk away**



A universal multiomics solution from discovery to translational research

COMET™ enables multiomics scalability for all stages of research. Work downstream of your RNA sequencing, transcriptomics or proteomics screening tools:

- **Replace unspecific or unavailable antibodies with RNA targets**
- **Perform studies on:**
 - secreted molecules, e.g. cytokines and chemokines
 - cross-validation and co-expression
 - tumor microenvironment (TME), gene therapy and infectious diseases
 - predictive biomarkers and signature validation
 - any animal tissue



IL6 GZMK CD3 CK DAPI

Human lung cancer



Signaling activity



Biomarker signature validation



Immuno-modulating target / vector presence validation



Cell subtype and state



TME composition

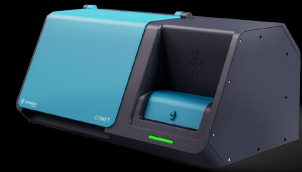
RNAscope™ HiPlex Pro for COMET™ RNA detection kit (ACD)



RNAscope™ is a pioneering technology in spatial genomics. Its large and widely adopted library of probes have been featured and validated in over 9,000 publications across many research areas.

- ✓ Two kit formats: 12-plex and 4-plex RNA targets
- ✓ Includes all reagents (except probes) optimized for use on COMET™
- ✓ Protease-free workflow

COMET™ Staining and imaging platform (Lunaphore)



COMET™ performs automated cycles of RNA detection, with RNAscope™, and protein detection, based on sequential immunofluorescence (seqIF™), which enables the use of clinically proven IHC antibodies.

- ✓ Instrument and Control Software with multiomics protocol template
- ✓ Protein Panel Builder with more than 70 markers and 300 protocol recommendations

Rapid assay development, selecting any RNA and protein target

RNA detection: select previously designed or made-to-order probes (RNAscope™ ISH) for virtually any gene of interest.

Obtain your RNAscope™ probes from design to shipment in a matter of days.

Protein detection: based on seqIF™, it uses standard, non-conjugated primary antibodies, providing users with freedom of antibody choice.

Characterize 10 new antibodies/week and add them to your marker library.

COMET™ and RNAscope™ HiPlex are For Research Use Only. Not for diagnostic use. COMET™ and seqIF™ are trademarks of Lunaphore. RNAscope™ is a trademark of Advanced Cell Diagnostics.

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