

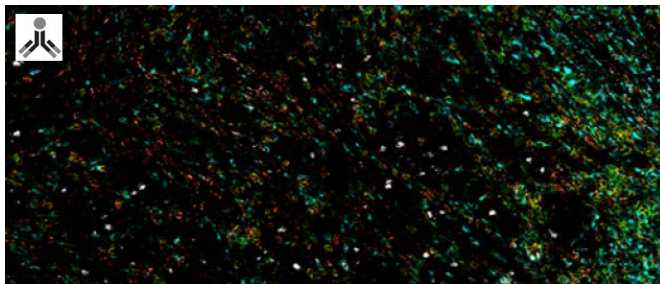
RNA - protein co-detection with Imaging Mass Cytometry using the RNAscope assay

Simultaneous detection of up to 12 RNAs and 28 proteins on the same slide with sub-cellular resolution.

Imaging Mass Cytometry™ (IMC™) is a proven tool for the study of complex cellular interactions in the tumor microenvironment (TME). It utilizes CyTOF® technology for simultaneous assessment of 40-plus protein markers at subcellular resolution without spectral overlap or background autofluorescence, thus providing unprecedented insight into the organization and function of the TME.

The RNAscope™ technology enables detection of target RNA transcripts with high sensitivity and specificity. Combining the RNAscope HiPlex assay with the Hyperion system will allow visualization of soluble factors such as cytokines and chemokines or when antibody options are limited.

Proteins



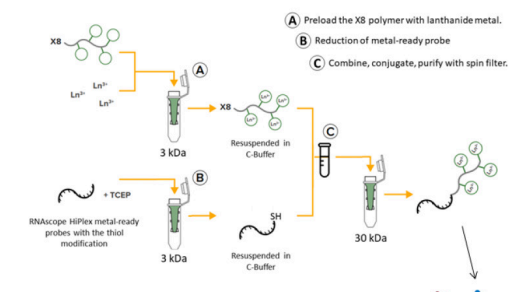
○ Ki-67 ● CD45 ● CD3 ● CD68

Key advantages of RNA-protein co-detection

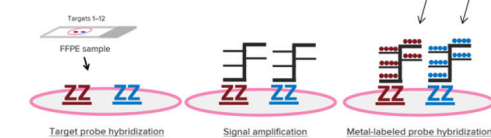
- Spatial phenotyping with cell marker-specific antibodies and target RNA expression.
- Visualizing inflammatory signatures.
- Studying cell-type specific gene expression.
- Identifying the cellular source of secreted factors.

Graphical schematic of the three-step procedure to acquire RNA and protein co-detection data with IMC

Step 1 – Labeling of Detection Oligonucleotides



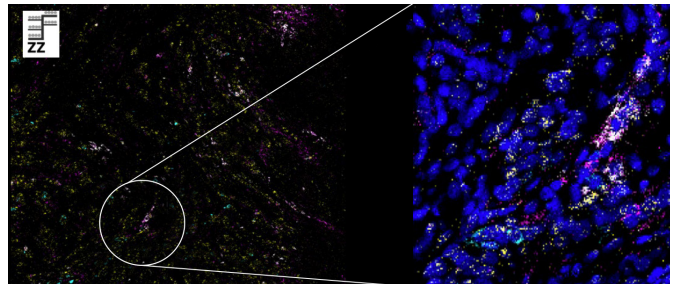
Step 2 – Modified RNAscope HiPlex Flex Assay v2



Step 3 – IMC Antibody Staining Overnight



RNA



○ CXCL10 ● VEGFA ● CXCL9 ● CXCL13 ● DNA

Product Information

Reagents for RNA detection

Assay - ACD, Bio-Techne	Product Info
RNAscope™ HiPlex12 Flex Reagents Kit v2	322725

Metal-ready probes - ACD, Bio-Techne	Product Info
RNAscope™ HiPlex metal-ready probes T1-T12	322710
RNAscope™ HiPlex metal-ready probe T1	322711
RNAscope™ HiPlex metal-ready probe T2	322712
RNAscope™ HiPlex metal-ready probe T3	322713
RNAscope™ HiPlex metal-ready probe T4	322714
RNAscope™ HiPlex metal-ready probe T5	322715
RNAscope™ HiPlex metal-ready probe T6	322716
RNAscope™ HiPlex metal-ready probe T7	322717
RNAscope™ HiPlex metal-ready probe T8	322718
RNAscope™ HiPlex metal-ready probe T9	322719
RNAscope™ HiPlex metal-ready probe T10	322720
RNAscope™ HiPlex metal-ready probe T11	322721
RNAscope™ HiPlex metal-ready probe T12	322722



Labelling kit - Standard BioTools	Product Info
Maxpar X8 Antibody labeling kit	Select the metal-specific kit of your choice