

# Accelerate RNA and Protein Biomarker Development with RNAscope™ on the Roche DISCOVERY ULTRA

## Now Protease-free

Combine the power of RNAscope *in situ* hybridization (ISH) with immunohistochemistry (IHC) or immunofluorescence (IF) on the same tissue section.

### Highlights:

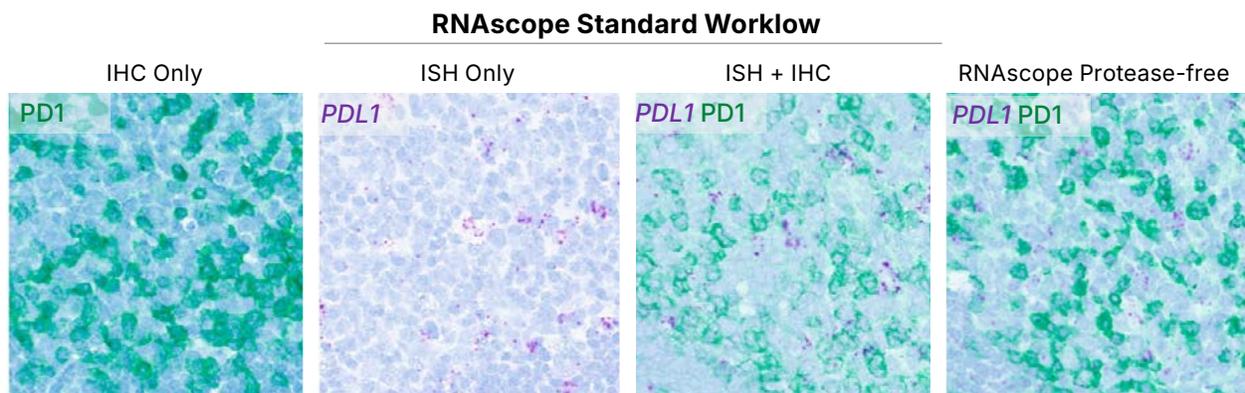
- Works with antibodies for protease-sensitive antigens
- Visualize tissue histology and architecture with chromogenic solutions
- Low-plex, high-throughput automated solutions for biomarker detection
- Relevant to cancer, gene therapy, biomarker validation for understanding mechanism of action and therapeutic efficacy

## Confidently Detect Protease-Sensitive Antigens

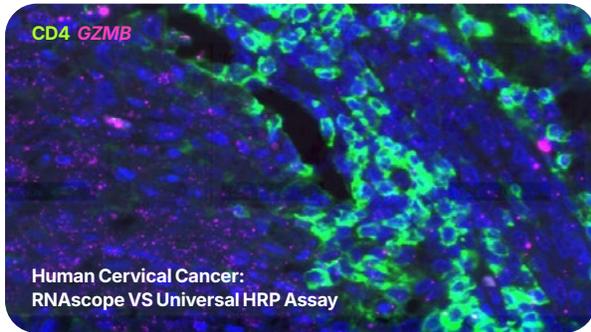


**Fig 1. Visualize protease-sensitive B cell marker CD20 in tonsils tissue with the standard and protease-free workflow.** The CD20 protein signal was significantly diminished with the RNAscope standard workflow (middle panel) compared to the signal in the IHC workflow (left panel). The new RNAscope protease-free workflow enabled the strong detection of the protease-sensitive CD20 protein (yellow- right panel) in combination with *IgK* RNA (red).

## Improve Signal Quality for Protease-Tolerant Antigens



**Fig 2. Enhanced visualization of PD1 in tonsil tissue with the new RNAscope protease-free workflow.** Protein markers like PD1 that worked previously with the standard workflow (middle panel) showed better signal quality with the new protease-free workflow (right panel). New RNAscope protease-free workflow enabled strong PD1 signal (green) detection (right panel) in combination with *PDL1* RNA (purple).



## Gain Insights into Complex Tumor Biology

### Same Section Multiomics Fluorescent Detection of RNA and Protein

Fig 3. Detect secreted cytokines with RNA markers to determine activation states and combine with immune cell marker proteins. CD4 protein is a marker of infiltrating T-cells and GZMB is a secreted protein. CD4 antibody is protease sensitive, and the new reagent enabled detection of CD4 along with GZMB RNA on the same section.

## RNAscope Protease-Free Workflow

### Robust Performance. Any RNA. Any Protein.

#### Expanded Protein CoDetection

Use any IHC/IF-validated antibody to co-detect proteins and RNAs on the same tissue section.

#### Preserved Tissue Morphology

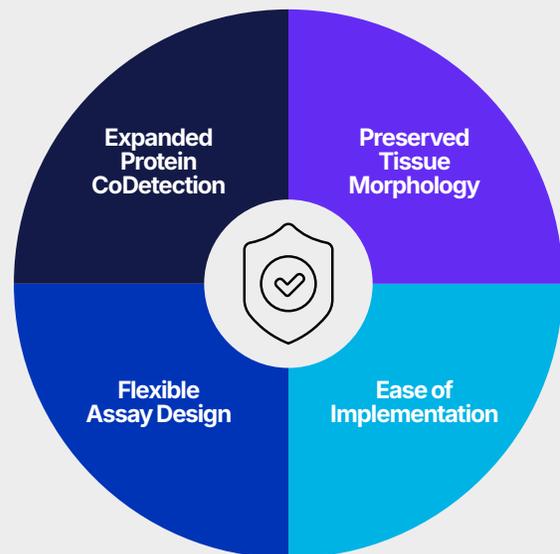
Visually stunning and precise results for image and data analysis.

#### Ease of Implementation

Seamlessly integrate with existing RNAscope protocols.

#### Flexible Assay Design

Workflow options to use either protease-free reagents or protease based on experimental goals.



## Ordering Table

Part Numbers	Description
323200	RNAscope™ VS Universal HRP Reagent Kit
323210	RNAscope™ VS Universal HRP Detection Reagents
323250	RNAscope™ VS Universal AP Reagent Kit
323260	RNAscope™ VS Universal AP Detection Reagents

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