

RNAscope® or BaseScope™ RED Assay combined with Immunohistochemistry - Integrated Co-Detection Workflow (ICW)

Introduction

This Technical Note provides guidelines for performing *in situ* hybridization (ISH) using RNAscope® 2.5 HD Detection Kit - RED (Cat. No. 322360) or BaseScope™ Detection Reagent Kit v2 - RED (Cat. No. 323900) with immunohistochemistry on formalin-fixed paraffin-embedded (FFPE) tissue sections. Protocols for other sample types are available in **Appendix B** and **Appendix C**. This technical note is for advanced users who are familiar with the procedures in the *Formalin-Fixed Paraffin Embedded (FFPE) Sample Preparation Pretreatment*

Required Reagents

The following reagents are required specifically for RNA-protein co-detection. For a complete list of materials and equipment, please refer to *Formalin-Fixed Paraffin Embedded (FFPE) Sample Preparation Pretreatment Guide User Manual, Part 1* (Cat. No. 322452-USM) and *RNAscope® 2.5 HD Detection Kit (RED) User Manual, Part 2* (Cat. No. 322360-USM) or *BaseScope™ Detection Reagent Kit v2 - RED User Manual* (Cat. No. 323900-USM).

ACD Reagents:

RNA-Protein Co-Detection Ancillary kit (Cat. No. 323180)		
Reagent	Quantity	Storage
Co-Detection Target Retrieval (10X)	70 mL x 4 bottles	Room temp (15–30°C)
Co-Detection Antibody Diluent	120 mL x 1 bottle	2–8°C
Co-Detection Blocker	4.5 mL x 1 bottle	2–8°C

Additional ACD Reagents	Ordering Info
RNAscope® H ₂ O ₂ and Protease Reagents	Cat No. 322381
RNAscope® 2.5 HD Detection Reagents-RED or BaseScope™ Detection Reagents v2-RED	Cat. No. 322360 or Cat. No. 323910
RNAscope® Target and Control Probes	Various

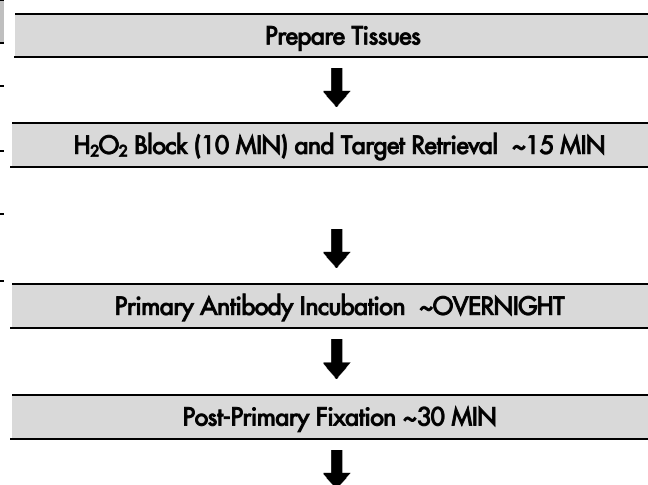
Guide User Manual, Part 1 (Catalog No. 322452-USM), *RNAscope® 2.5 HD Detection Kit (RED) User Manual, Part 2* (Catalog No. 322360-USM), or *BaseScope™ Detection Reagent Kit v2 - RED User Manual* (Cat. No. 323900-USM). For every chemical, read the Safety Data Sheet (SDS) and follow handling instructions. Wear appropriate protective eyewear, clothing, and gloves. For the latest services and support information, go to www.acdbio.com/support.

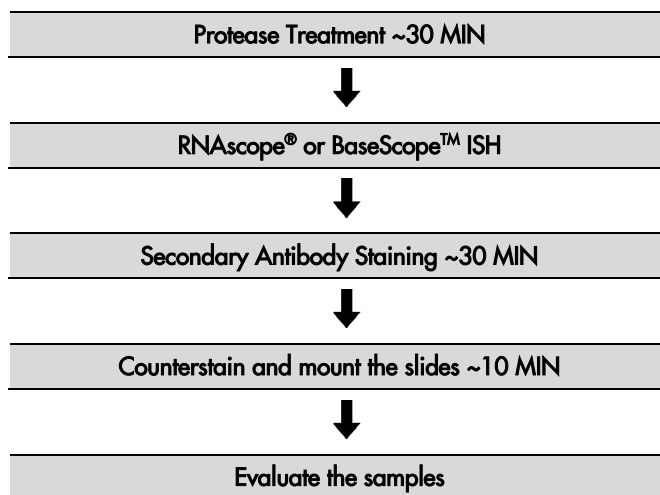
Additional ACD Reagents	Ordering Info
2.5 LS Green Accessory Pack (optional for green IHC)	Cat. No. 322550

Additional Reagents:

Reagents	Ordering Info
Phosphate Buffered Saline w/0.1% Tween-20 (PBS-T) (1X)	User provided
Primary Antibody	User provided
10% Neutral Buffered Formalin	User provided

Workflow





IMPORTANT! Standard antibody diluents negatively impact RNA signal and are not recommended for use with this workflow. Co-Detection Antibody Diluent is formulated for maximum compatibility with the RNAscope® and BaseScope™ assays and will best preserve RNA signal.

Note: For optimal protein detection, you may want to use a higher primary antibody concentration than you would normally use for immunofluorescence alone.

For sample preparation, please refer to Formalin-Fixed Paraffin Embedded (FFPE) Sample Preparation Pretreatment Guide User Manual, Part 1 (Cat. No. 322452-USM).

Prepare Slides

1. Bake slides in a dry air oven for **30 MIN** at **60°C**.
2. In a fume hood, fill 2 Tissue-Tek® clearing agent dishes with ~200 ml fresh xylene and fill 2 Tissue-Tek® staining dishes with ~200 ml fresh 100% ethanol.
3. Place slides in a Tissue-Tek® slide rack in xylene for **5 MIN**. Repeat in second xylene dish for an additional **5 MIN**.
4. Incubate slides in 100% ethanol for **1 MIN**. Repeat in second 100% ethanol dish for **1 MIN**.
5. Remove slides from rack and let air dry for **5 MIN** to **OVERNIGHT** at **RT**.

Apply Hydrogen Peroxide

1. Add 2–4 drops of RNAscope® Hydrogen Peroxide to each section for **10 MIN** at **RT**. Use enough solution to completely cover the sections.
2. Place slides in a Tissue-Tek® Slide Rack and wash twice with distilled water.

Apply Target Retrieval

1. Cover a beaker containing 700 mL fresh 1X Co-Detection Target Retrieval with foil and bring temperature to **98–102°C** using a hotplate. Maintain this temperature.
2. With a pair of forceps *very slowly* submerge the slide rack into the hot 1X Co-Detection Target Retrieval solution for **15 MIN**.

Note: Depending on tissue type, you may need to adjust the boiling time.

Note: Maintain temperature at **98–102°C** for the duration of target retrieval.

Note: Alternatively, use the steamer method for target retrieval. For details on target retrieval methods, please refer to Chapter 3 of the RNAscope® 2.5 HD Detection Kit - RED User Manual (Doc. No. 322360-USM) or the BaseScope™ Detection Reagent Kit v2 - RED User Manual (Doc. No. 323900-USM), available at www.acdbio.com/technical-support/user-manuals. Make sure that you use 1X Co-Detection Target Retrieval.

3. *Immediately* transfer the hot slide rack to a staining dish containing distilled water.
4. Wash slides in the distilled water by moving the rack up and down 3–5 times and repeat with fresh distilled water.
5. Wash slides in 1X PBS-T by moving the rack up and down 3–5 times.

Create Barrier

1. Working quickly to prevent the sample from drying out, use a tissue to carefully dry the glass surrounding your sample. Then, draw 2–4 times around section using the ImmEdge™ hydrophobic barrier pen. Let the barrier dry **~30 SEC**.

IMPORTANT! Do not allow the sample to dry out completely as this may negatively impact IHC signal.

Apply Primary Antibody

1. Place slides in the HybEZ™ Slide Rack and add 150–200 µl of primary antibody diluted in Co-Detection Antibody Diluent to each section. Use enough solution to cover each tissue section completely.
2. Place the HybEZ™ Slide Rack in the Humidity Control Tray lined with damp humidifying paper and incubate **OVERNIGHT** at **4°C**.

Prepare Materials – Day 2

1. Bring HybEZ™ Oven to **40°C**.

- Place a wet humidifying paper in the Humidity Control Tray, leaving the HybEZ™ Slide Rack on the bench. Insert the covered tray into the oven and close the oven door. The tray should be pre-warmed for at least **30 MIN** before use. Keep tray warm during the assay.

Post-primary fixation

- Following primary antibody incubation, wash slides in PBS-T for **2 MIN**. Repeat twice with fresh PBS-T each time.
- In a fume hood, place slides in a Tissue-Tek® Slide Rack and submerge in 10% Neutral Buffered Formalin (NBF) for **30 MIN** at **RT**.
- In a fume hood, wash slides in PBS-T for **2 MIN**. Repeat wash with fresh PBS-T buffer.
- Wash slides in PBST for an additional **2 MIN**. Repeat wash with fresh PBS-T buffer.

IMPORTANT! Formalin that has been stored for more than six months or opened for more than one month can result in suboptimal fixation.

Apply Protease

- Place slides in the HybEZ™ Slide Rack and add one of the following:
 - If doing RNAscope®, add 2–4 drops of RNAscope® Protease Plus to each section.
 - If doing BaseScope™, add 2–4 drops of RNAscope® Protease IV to each section.
 Use enough solution to cover each tissue section completely.

IMPORTANT! Be sure to use the correct protease for each assay. Using the incorrect protease can result in suboptimal RNA or protein detection.

- Place the HybEZ™ Slide Rack in the pre-warmed HybEZ™ Humidity Control Tray. Seal tray and insert back into the HybEZ™ Oven. Incubate at **40°C** for **30 MIN**.

Note: Prepare RNAscope® 2.5 HD or BaseScope™ v2 assay materials during this incubation.

- Place slides in a Tissue-Tek® Slide Rack submerged in distilled water.
- Wash the slides by moving the rack up and down 3–5 times. Repeat with fresh distilled water.

Part 3: In Situ Hybridization

Proceed to RNAscope® or BaseScope™ protocol starting with probe hybridization and ending with development of RED solution.

IMPORTANT! For co-detection using the 2.5 HD RNAscope® Red assay, refer to the *RNAscope® 2.5 HD Detection Kit (Red) User Manual Part 2* (Document No. 322360-USM). For Co-Detection using the BaseScope™ v2 assay, refer to the *BaseScope™ Detection Reagent Kit v2 – RED User Manual* (Doc. No. 323900-USM) available at <http://www.acdbio.com/technical-support/user-manuals>.

IMPORTANT! Proceed to Part 4: Immunohistochemistry (Part B) assay immediately after developing the chromogen in either the RNAscope® 2.5 HD or BaseScope™ v2 RED assay. Do not counterstain your sample until after completing the IHC procedure.

Part 4: Perform Immunohistochemistry Part B

Tissue Blocking

- Wash slides in 1X Wash Buffer for **2 MIN**. Repeat with fresh Wash Buffer.
- Apply Co-Detection Blocker to the sections and incubate for **15 MIN** at **40°C**.
- Wash slides in 1X Wash Buffer for **2 MIN**. Repeat with fresh Wash Buffer.
- Wash slides with PBS-T for **2 MIN**.

Secondary Antibody Staining

- Add secondary antibody diluted in Co-Detection Antibody Diluent to the sections and incubate for **30–60 MIN** at **RT**. Use enough solution to completely cover the sections.
- Wash slides with PBS-T for **2 MIN**. Repeat with fresh PBS-T.
- Proceed with IHC detection (either Brown **OR** Green chromogen) and counterstain.

Detect the IHC Signal and Counterstain Using Brown Chromogen

- Mix equal volumes of BROWN-A and BROWN-B.
- Remove excess liquid from slides and pipette ~150–200 µl DAB onto each tissue section.
- Incubate sealed tray containing HybEZ™ slide rack for **10 MIN** at **RT**.
- Remove DAB from slides and wash 3–5 times in distilled water.

5. Place slides in 50% Hematoxylin I for **2 MIN** at **RT**.
6. Wash slides 3–5 times in distilled water and repeat with fresh distilled water.
7. Wash slides **10 SEC** in 0.02% Ammonia water.
8. Wash slides 3–5 times in distilled water.

Detect the IHC Signal and Counterstain Using Green Chromogen

1. Wash slides in 1X Wash Buffer for **2 MIN**.
2. Prepare 200 µl of working Green solution per slide using a 1:50 ratio of Green-B to Green-A. Mix well. Combine reagents immediately before use.

IMPORTANT! Use the Green working solution within **5 MIN** of mixing. Do not expose to direct sunlight or UV light.

3. Remove excess liquid from slides and pipette ~200 µl Green solution onto each tissue section, covering each section entirely.
4. Incubate in sealed tray containing HybEZ™ slide rack for **15-30 MIN** at **RT**.
5. Remove solution and insert slides into a Tissue-Tek® Slide Rack. Submerge slides in a Tissue-Tek® Staining Dish filled with distilled water.
6. Quickly wash slides with fresh distilled water for no longer than **30 SEC**.

IMPORTANT! Work quickly as Green signal may fade when left in water or hematoxylin for longer than 30 seconds.

7. Place slides in 50% Hematoxylin I for **30 SEC** at **RT**.
8. *Immediately* transfer the slide rack into a staining dish filled with tap water. Do not let the slides remain in the water for more than 30 seconds. Briefly repeat tap water rinse once or twice.
9. Wash slides **10 SEC** in 0.02% Ammonia water.
10. Transfer the slide rack into a staining dish filled with tap water. Do not let the slides remain in the water for more than 30 seconds. Briefly repeat tap water rinse once or twice.

IMPORTANT! Use **ONLY** 0.02% Ammonia water for the bluing step. Commercial bluing solutions may degrade the green signal.

Dry and Mount the Slides

1. Dry slides in a **60°C** oven for **30 MIN**.
2. Cool the slides for **5 MIN** at **RT**.

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3. Dip the slides into fresh pure xylene and immediately place 1-2 drops of EcoMount on the slide before the xylene dries. Place a coverslip over the section.
4. Air dry for **5 MIN**.

Evaluate the Results

Examine tissues under a standard bright field microscope. The RNAscope® and BaseScope™ assays should produce clear and intense, red, punctate dots. Puncta can fill a large portion of the cytoplasm when a robust signal is detected.

Obtaining Support

For the latest services and support information, go to: <https://acdbio.com/technical-support/support-overview>.

At the website, you can:

- Access telephone and fax numbers to contact Technical Support and Sales.
- Search through FAQs.
- Submit a question directly to Technical Support.

Appendix A. Integrated Co-Detection Troubleshooting Guide

To optimize protein detection, we recommend titrating antibody concentration within the co-detection workflow. You may want to use a higher primary antibody concentration than you would normally use for IHC alone.

If non-specific IHC staining is observed, consider adding a pre-secondary blocking step. For pre-secondary blocking, cover tissue sections with co-detection antibody diluent for **1 HR** at **RT**. After blocking, remove excess liquid but do not rinse tissues. Proceed with secondary antibody staining.

The post-primary fixation and pretreatment conditions in this Tech Note provide optimal RNA and protein detection across most tissue samples. If you need to optimize the protocol for a specific sample or target of interest, you can adjust the following parameters:

Reagent	Incubation Temp.	Recommended Incubation Time	Optimization Range
Target Retrieval	40°C	15 MIN	15-30 MIN
Primary Antibody	4°C	OVERNIGHT	60-120 MIN at RT or OVERNIGHT at 4°C

MK 51-149/Rev B/Date 10/05/2020

Reagent	Incubation Temp.	Recommended Incubation Time	Optimization Range
10% NBF	Ambient	30 MIN	15–60 MIN
Protease Plus (for RNAscope® 2.5 HD)	40°C	30 MIN	15–30 MIN
Protease IV (for BaseScope™ v2)	40°C	30 MIN	15–30 MIN*
Secondary Antibody	Ambient	30 MIN	15–60 MIN

* If stronger protease treatment is required, two 30 minute incubations may be performed. Fresh reagent must be applied prior to the second incubation.

Appendix B. Integrated Co-Detection for Fresh Frozen Tissue

Part 1: Prepare Tissue

To prepare fresh frozen tissue sections, follow the instructions in Parts 1 and 2 of *Preparing Fresh Frozen Tissue for RNAscope® and BaseScope™ Assays* (Doc. No. MK 50-013) available at www.acdbio.com/technical-support/user-manuals. After preparing tissue sections, fix your samples using the following procedure.

Sample Fixation

1. In a fume hood, pre-chill 200 mL of 10% neutral buffered formalin (NBF) or 4% paraformaldehyde (PFA) in 1X PBS to 4°C.
2. Remove fresh frozen tissue slides from –80°C. In a fume hood, immediately immerse the slides in the pre-chilled 10% NBF or 4% PFA.
3. Incubate the slides for at least **15 MIN** at 4°C.

Dehydrate the Tissue

1. Prepare 200 mL 50% EtOH, 200 mL 70% EtOH, and 400 mL 100% EtOH.
2. Remove the slides from NBF or PFA. Immerse in 50% EtOH. Incubate for **5 MIN** at **ROOM TEMPERATURE (RT)**.
3. Remove the slides from 50% EtOH. Immerse in 70% EtOH. Incubate for **5 MIN** at **RT**.
4. Remove the slides from 70% EtOH. Immerse in 100% EtOH. Incubate for **5 MIN** at **RT**.
5. Remove the slides from 100% EtOH. Immerse in fresh 100% EtOH. Incubate for **5 MIN** at **RT**.

Create Barrier

1. Remove slides from 100% EtOH. Leave slides for **5 MIN** at **RT**.

2. Draw 2–4 times around tissue using the ImmEdge™ hydrophobic barrier pen. Let the barrier dry ~**30 SEC**.

Part 2: ICW Pretreatment and Immunohistochemistry (Part A)

Prepare Materials

1. Prepare working dilution of primary antibody using Co-Detection Antibody Diluent.

IMPORTANT! It is important to use antibodies diluted in Co-Detection Antibody Diluent (Cat. No. 323160). Standard antibody diluents negatively impact RNA signal and are not recommended for use with this workflow. Co-Detection Antibody Diluent is formulated for maximum compatibility with the RNAscope® and BaseScope™ assays.

Note: For optimal protein detection, you may want to use a higher primary antibody concentration than you would normally use for IHC alone.

Apply Primary Antibody

1. Place slides in the HybEZ™ Slide Rack and add 150–200 µl of primary antibody diluted in Co-detection Antibody Diluent to each section. Use enough solution to cover each tissue section completely.
2. Place the HybEZ™ Slide Rack in the Humidity Control Tray lined with damp humidifying paper and incubate at 4°C **OVERNIGHT**.

Post-primary fixation

1. Following primary antibody incubation, wash slides in PBS-T for **2 MIN**. Repeat twice with fresh PBS-T each time.
2. In a fume hood, place slides in a Tissue-Tek® Slide Rack and submerge in 10% Neutral Buffered Formalin (NBF) for **30 MIN** at **RT**.
3. In a fume hood, wash slides in PBS-T for **2 MIN**. Repeat with fresh PBS-T.
4. Wash slides in PBST for an additional **2 MIN**. Repeat with fresh PBS-T.

IMPORTANT! Formalin that has been stored for more than six months or opened for more than one month can result in suboptimal fixation.

Apply Protease

1. Place slides in the HybEZ™ Slide Rack. Add 2–4 drops of RNAscope® Protease IV to each section.

Use enough solution to cover each tissue section completely. Incubate for **30 MIN** at **RT**.

IMPORTANT! Be sure to use the correct protease for your assay of choice. Using the incorrect protease may result in suboptimal RNA or protein detection.

Note: Depending on tissue type and IHC target, you may need to adjust protease treatment strength and/or time. If stronger protease treatment is required, perform two 30 minute incubations. Fresh protease must be applied prior to the second incubation.

Note: Prepare RNAscope® 2.5 HD or BaseScope™ v2 assay materials during this incubation.

2. Place slides in a Tissue-Tek® Slide Rack submerged in distilled water
3. Wash the slides by moving the rack up and down 3–5 times. Repeat with fresh distilled water.

Immediately proceed to Part 3: In Situ Hybridization on page 3 and complete the remaining steps.

Appendix C. Integrated Co-Detection for Fixed Frozen Tissue

Part 1: Prepare Tissue

To prepare fixed frozen tissue sections, follow the instructions for “Fixed frozen tissue sample preparation” in Chapter 3 of the *RNAscope® Multiplex Fluorescent Reagent Kit v2 Assay* (Doc. No. 323100-USM) available at www.acdbio.com/technical-support/user-manuals. After preparing tissue sections, fix your samples using the following procedure.

Sample Fixation

1. In a fume hood, pre-chill 200 mL of 10% neutral buffered formalin (NBF) or 4% paraformaldehyde (PFA) in 1X PBS to **4°C**.
2. Remove fresh frozen tissue slides from **-80°C**. Wash the slides with 200 mL 1X PBS in a Tissue Tek® slide rack for **5 MIN** while moving the rack up and down to remove Optimal Cutting Temperature (OCT) embedding media.
3. Bake the slides for **30 MIN** at **60°C**.
4. In a fume hood, post-fix the slides by immersing them in the pre-chilled 10% NBF or 4% PFA in 1X PBS for **15 MIN** at **4°C**.

Dehydrate the Tissue

1. Prepare 200 mL 50% EtOH, 200 mL 70% EtOH, and 400 mL 100% EtOH.
2. Remove the slides from NBF or PFA. Immerse in 50% EtOH. Incubate for **5 MIN** at **ROOM TEMPERATURE (RT)**.
3. Remove the slides from 50% EtOH. Immerse in 70% EtOH. Incubate for **5 MIN** at **RT**.
4. Remove the slides from 70% EtOH. Immerse in 100% EtOH. Incubate for **5 MIN** at **RT**.
5. Remove the slides from 100% EtOH. Immerse in fresh 100% EtOH. Incubate for **5 MIN** at **RT**.
6. Remove slides from EtOH and let air dry for **5 MIN** to **OVERNIGHT** at **RT**.

Part 2: ICW Pretreatment and Immunohistochemistry (Part A)

Prepare Materials – Day 1

1. Prepare 700 mL fresh 1X Co-Detection Target Retrieval in a beaker. Cover with foil and bring temperature to **98–102°C** using a hotplate. Maintain this temperature.
2. Place a wet humidifying paper in the Humidity Control Tray, leaving the HybEZ™ Slide Rack on bench.
3. Prepare working dilution of primary antibody using Co-Detection Antibody Diluent.

IMPORTANT! It is important to use antibodies diluted in Co-Detection Antibody Diluent (Cat. No. 323160). Standard antibody diluents negatively impact RNA signal and are not recommended for use with this workflow. Co-Detection Antibody Diluent is formulated for maximum compatibility with the RNAscope® and BaseScope™ assays.

Note: For optimal protein detection, you may want to use a higher primary antibody concentration than you would normally use for IHC alone.

Note: Alternatively, use the steamer method for target retrieval. For details on target retrieval methods, please refer to Chapter 3 of the *RNAscope® 2.5 HD Detection Kit - RED User Manual* (Doc. No. 322360-USM) or the *BaseScope™ Detection Reagent Kit v2 - RED User Manual* (Doc. No. 323900-USM), available at www.acdbio.com/technical-support/user-manuals. Make sure that you use 1X Co-Detection Target Retrieval.

Apply Hydrogen Peroxide

1. Add 2–4 drops of RNAscope® Hydrogen Peroxide to each section for **10 MIN** at **RT**. Use enough solution to completely cover the sections.
2. Place slides in a Tissue-Tek® Slide Rack and wash twice with distilled water.

Apply Target Retrieval

1. With a pair of forceps *very slowly* submerge the slide rack into the hot 1X Co-Detection Target Retrieval solution for **5 MIN**.

Note: Depending on tissue type, boiling time may need to be adjusted.

Note: Maintain temperature at **98–102°C** for the duration of target retrieval.

2. *Immediately* transfer the hot slide rack to a staining dish containing distilled water.
3. Wash slides in the distilled water by moving the rack up and down 3–5 times and repeat with fresh distilled water.
4. Wash slides in 1X PBS-T by moving the rack up and down 3–5 times.

Create Barrier

1. Working quickly to prevent the sample from drying out, use a tissue to carefully dry the glass surrounding your sample. Then, draw 2–4 times around section using the ImmEdge™ hydrophobic barrier pen. Let the barrier dry **~30 SEC**.

IMPORTANT! Do not allow the sample to dry out completely as this may negatively impact IHC signal.

Apply Primary Antibody

1. Place slides in the HybEZ™ Slide Rack and add 150–200 µl of primary antibody diluted in Co-detection Antibody Diluent to each section. Use enough solution to cover each tissue section completely.
2. Place the HybEZ™ Slide Rack in the Humidity Control Tray and incubate at **4°C OVERNIGHT**.

Prepare Materials – Day 2

1. Bring HybEZ™ Oven to **40°C**.
2. Place a wet humidifying paper in the Humidity Control Tray, leaving the HybEZ™ Slide Rack on bench. Insert the covered tray into the oven and

close the oven door. The tray should be pre-warmed for at least **30 MIN** before use. Keep tray warm during the assay.

Post-primary fixation

1. Following primary antibody incubation, wash slides in PBS-T for **2 MIN**. Repeat twice with fresh PBS-T each time.
2. In a fume hood, place slides in a Tissue-Tek® Slide Rack and submerge in 10% Neutral Buffered Formalin (NBF) for **30 MIN** at **RT**.
3. In a fume hood, wash slides in PBS-T for **2 MIN**. Repeat with fresh PBS-T.
4. Wash slides in PBS-T for an additional **2 MIN**. Repeat with fresh PBS-T.

IMPORTANT! Formalin that has been stored for more than six months or opened for more than one month can result in suboptimal fixation.

Apply Protease

1. Place slides in the HybEZ™ Slide Rack. If doing RNAscope®, add 2–4 drops of RNAscope® Protease Plus to each section. Alternatively, if doing BaseScope™, add 2–4 drops of RNAscope® Protease IV to each section. Use enough solution to completely cover each tissue section.

IMPORTANT! Be sure to use the correct protease for each assay. Using the incorrect protease can result in suboptimal RNA or protein detection.

2. Place the HybEZ™ Slide Rack in the pre-warmed HybEZ™ Humidity Control Tray. Seal tray and insert back into the HybEZ™ Oven. Incubate at **40°C** for **30 MIN**.

NOTE: Depending on tissue type and IHC target, you may need to adjust protease treatment strength and/or time.

NOTE: Prepare RNAscope® 2.5 HD or BaseScope™ v2 assay materials during this incubation.

3. Place slides in a Tissue-Tek® Slide Rack submerged in distilled water
4. Wash the slides by moving the rack up and down 3–5 times. Repeat with fresh distilled water.

Immediately proceed to Part 3: In Situ Hybridization on page 3 and complete the remaining steps.

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NOTICE TO PURCHASER: PLEASE REFER TO THE RNASCOPE® 2.5 HD DETECTION KIT (RED) USER MANUAL OR THE BASESCOPE™ DETECTION KIT v2 USER MANUAL FOR LIMITED USE LABEL LICENSE OR DISCLAIMER INFORMATION. Advanced Cell Diagnostics, Inc. reserves the right to change its products and services at any time to incorporate technological developments. This manual is subject to change without notice. Although this manual has been prepared with every precaution to ensure accuracy, Advanced Cell Diagnostics, Inc. assumes no liability for any errors, omissions, or for any damages resulting from the use of this information.

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