

**Catalog Number:** AP-KT-40-R-NP

**Description:** 40 Tests

**Intended Use:**

For Research Use Only. Not for use in diagnostic procedures.

**Summary & Explanation:**

The NISH AP Detection Kit is a chromogenic detection system designed for use with NISH Probe assays in *in situ* hybridization (ISH) applications. The kit enables visualization of probe-target hybridization events in formalin-fixed, paraffin-embedded (FFPE) tissue sections through an enzyme-mediated colorimetric reaction.

This system utilizes alkaline phosphatase (AP)-based detection chemistry and is meant to be combined with Red chromogen to produce a localized red stain at the site of hybridization. The kit is optimized to support consistent, high-quality signal development across a broad range of NISH Probe targets, allowing for clear interpretation using a brightfield microscope.

**Principle of Procedure:**

The NISH AP Detection Kit is intended for use on FFPE tissue sections following standard dewaxing and heat-induced epitope retrieval (HIER) procedures. After hybridization of a NISH Probe to its complementary nucleic acid target, the NISH detection reagents are applied sequentially.

Through a series of amplification and signal enhancement steps, the hybridized probe is detected using an alkaline phosphatase (AP)-mediated reaction. Upon addition of Red chromogen, a red, insoluble stain forms at the site of hybridization.

This chromogenic signal enables visualization and localization of target nucleic acids within preserved tissue morphology when examined using a brightfield microscope.

**Species Reactivity:** Human

**Known Application:** *in situ* hybridization on FFPE tissue

**Reagents Provided:**

NISH AP Detection Kit is comprised of 7 solutions in pre-filled vials.

NISH Pre-Treatment Solution (NISH-PT-001 x 1)

NISH Detection 1 (NISH-D-001 x 1)

NISH Detection 2 (NISH-D-002 x 1)

NISH Detection 3 (NISH-D-003 x 1)

NISH Detection 4 (NISH-D-004 x 1)

NISH Detection 5 (NISH-D-005 x 1)

NISH Detection 6 – AP (NISH-D-006-AP x 1)

**Reconstitution, Mixing, Dilution, Titration:**

The NISH AP Detection Kit is optimized and ready to use with Empire NISH Probes and ancillary reagents. No reconstitution, mixing, dilution or titration is required.

**Storage and Stability:**

Store probe at 4°C and away from light. The product is stable to the expiration date printed on the label, when stored under these conditions. Do not use after expiration date.

**Materials and Reagents Required but Not Provided:**

- NISH Probe
- NISH Red Kit (FR-KT-135-R-NP)
- Cover (NPRI10002T1300)
- High-AR (NPRI10003L2T2250)
- TBS Tween 20 Buffer 10X (NPRI10007MMT84)
- Cleaning Solution (NPRI10008MMT84)
- DEWAX (NPRI10001T280)
- Contrast Hematoxylin HDH3 (NPRI10006L2T3600)
- Light Microscope (40-400X magnification)
- NeoPath Pro Automated Stainer (NPP0001)

**Instructions for Use:**

This kit is intended for use with the NeoPath Pro. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Editor are dependent on the NISH Probe being used. Please refer to the NISH Probe datasheet for protocol parameters.

**Limitations:**

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

**Precautions:**

1. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come in contact with sensitive areas, wash with copious amounts of water.<sup>1</sup>



**Health Hazard      Irritant      Corrosive (to skin)**

**Technical Support:**

Contact Empire Technical Support at +1.800.715.5880 for questions regarding this product.

**References:**

1. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory workers from occupationally Acquired Infections; Approved Guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.