

**Catalog Number:** FR-KT-135-R-NP

**Description:** 135 Test

**Intended Use:**

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

**Summary & Explanation:**

The NISH Red Kit is a chromogen system designed for use in in situ hybridization (ISH) applications to enable visualization of probe-target hybridization events. The kit provides the components necessary to generate a visible colorimetric signal when used in conjunction with AP-based detection systems.

This kit includes Red chromogen and Red buffer, which work together to produce a localized brown precipitate at the site of hybridization. When applied following AP-mediated detection, the reaction results in a stable, insoluble signal that can be visualized using a brightfield microscope.

**Principle of Procedure:**

Following hybridization of a NISH probe and subsequent AP-based detection, the Red chromogen and Buffer are mixed according to the protocol used.

Upon application to the tissue section, the alkaline phosphatase (AP) enzyme catalyzes the reaction of the Red, resulting in the formation of a red, insoluble precipitate at the site of hybridization.

This chromogenic reaction 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 Red Kit is comprised of 2 solutions in pre-filled vials.

| Kit SKU        | Component SKU | Component Description | Quantity x Volume |
|----------------|---------------|-----------------------|-------------------|
| FR-KT-135-R-NP | NPRI10098T45  | NISH Red Chromogen    | 3 x 10 mL         |
|                | NPRI10099T135 | NISH DAB Buffer       | 1 x 30 mL         |

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

The NISH Red 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
- Cover (NPRI10002T1300)
- High-AR (NPRI10003L2T2250)
- TBS Tween 20 Buffer 10X (NPRI10007MMT84)
- Cleaning Solution (NPRI10008MMT84)
- DEWAX (NPRI10001T280)
- Contrast Hematoxylin HDH3 (NPRI10006L2T3600)
- NISH Detect AP Kit (AP-KT-42-R-NP)
- 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. Kit reagent(s) contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN<sub>3</sub>) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976)<sup>1</sup>
2. Kit reagents contain less than 0.05% ProClin 300 and/or less than 1% ProClin 950. Wear gloves and protective clothing and take reasonable precautions when handling as ProClin is classified as an irritant and may cause skin contact sensitization. Avoid contact with eyes, skin, and mucous membranes. 3. Handle materials of human or animal origin as potentially biohazardous and dispose of such materials with proper precautions. In the event of exposure, follow the health directives of the responsible authorities where used.<sup>2,3</sup>
3. 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>3</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. Center for Disease Control Manual. Guide: Safety Management, NO. CDC22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts.
2. Occupational Safety and Health Standards: Occupational exposure to hazardous chemicals in laboratories. (29 CFR Part 1910.1450). Fed. Register.
3. 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.