

## ALK (2p23.2) Break Apart Orange/Green

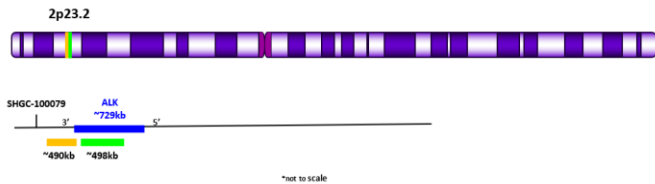
FISH Probe  
902-OPPR7333-020322

**Catalog Number:** **OPPR7333 T30**  
**Description:** **Prediluted FISH Probe**

**Intended Use:**  
For Research Use Only. Not for use in diagnostic procedures.

**Summary & Explanation:**  
The ALK (2p23.2) Break Apart FISH Probe is designed to detect the rearrangement of the ALK gene located on 2p23. The ALK gene can fuse with one of 20 known ALK gene rearrangement partners, the most common being t(2;5)(p23;q35) (1). The resultant fusion proteins generated from ALK gene rearrangement plays a vital role in driving the pathogenesis of several different types of cancer, such as non-small cell lung cancer and anaplastic large cell lymphoma (2).

**Principle of Procedure:**  
The ALK (2p23.2) Break Apart (Orange/Green) is made up of an orange probe which flanks the 3' telomeric end of the ALK gene and a green probe which flanks the 5' centromeric end of the orange probe and covers part of the ALK gene. Two yellow (orange/green) fusion signals will be observed in normal diploid nuclei, when the probe is hybridized to a normal cell.



**Species Reactivity:** Human

**Known Application:** Fluorescence In-situ Hybridization (FISH) on formalin-fixed paraffin-embedded (FFPE) tissues.

**Supplied As:** Probe in hybridization buffer

**Reconstitution, Dilution and Mixing:**  
ALK (2p23.2) Break Apart Orange/Green FISH Probe is provided ready-to-use.  
**Bring the vial to room temperature 30 minutes prior to EACH use and MIX WELL by shaking vigorously by hand for 3 minutes in different orientations. If vial volume is 1mL or less, mix using a pipette for 20 aspirations.**

**Materials and Reagents Required but Not Provided:**  
Reagents and materials, such as detection kits and ancillary reagents are not provided. Refer to the ONCORE Pro FISH Kit (OPPR6064K) and the ONCORE Pro ISH Dewax Kit (OPRI6020K) datasheets. DAPI (120ng/mL) solution is also required for counterstaining. Call Technical Support for additional information on reagents and instrument accessories.

**Storage and Stability:**  
Store probe at -20°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.

**Instructions for Use:**  
OPPR7333 is intended for use with the ONCORE Pro. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Editor should be programmed as follows:  
**Protocol Name:** ALK BA 2CP  
**Protocol Template (Description):** PathoFISH Template 1  
**Reagent Name, Time, Temp.:** FISHzyme\*, 35 min., 37°C

\*FISHzyme (OPPR6066) is a part of ONCORE Pro FISH Kit (OPPR6064K).  
Incubation time of FISHzyme may be modified based on the tissue type and tissue fixation.

Slides should be baked offline for 1 hour at 60°C prior to loading onto the instrument.

The ONCORE Pro Baking Slides Before Staining setting should be selected and set for 10 min at 60°C to improve tissue retention.

- Post ONCORE Pro FISH staining processing:
1. Gently rinse slides in TBS buffer, followed by a gentle rinse in DI water.
  2. Place the slide rack in a dark cabinet to air dry.
  3. Apply 1-2 drops of Fluoro Care Mounting Media (FP001) under a suitable size coverslip, e.g., 22x40 mm.

**Technical Notes:**

1. FISH runs should not be delayed as the probe will separate.
2. Biocare Medical Break Apart FISH probes are optimized to provide the best signal performance using optical filters that can accommodate the excitation/emission wavelengths specified below. Using filters outside these spectral specifications may produce sub-optimal results.

| Fluorophore | Excitation (nm) | Emission (nm) |
|-------------|-----------------|---------------|
| GREEN       | 490             | 515           |
| ORANGE      | 546             | 575           |

**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.

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**Precautions:**

1. This product contains formamide and fluorescent dyes that may be hazardous to your health. The SDS is available upon request and is located at <http://biocare.net>.
2. 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 (3).

**Health Hazard****Irritant****Corrosive (to skin)****Technical Support:**

Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

**References:**

1. Pearson, Joel D., Jason K. H. Lee, Julinor T. C. Bacani, Raymond Lai, and Robert J. Ingham. "NPM-ALK: The Prototypic Member of a Family of Oncogenic Fusion Tyrosine Kinases." *Journal of Signal Transduction*: 1-14.
2. Iacono, D., R. Chiari, G. Metro, C. Bennati, G. Bellezza, C. Cenci, B. Ricciuti B, A. Sidoni, S. Baglivo, V. Minotti, and L. Crinò. "Future Options for ALK-positive Non-small Cell Lung Cancer." *Lung Cancer* 87.3 (2014): 211-219.
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.