

ROS1 (6q22) Break Apart Orange/Green

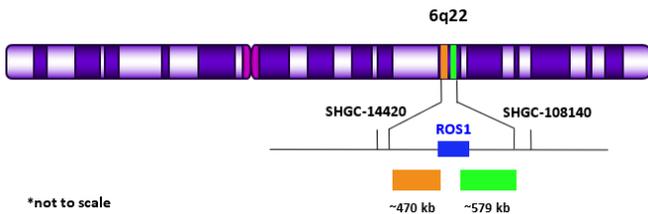
FISH Probe
902-OPPR7332-020322

Catalog Number: **OPPR7332 T30**
Description: **Prediluted FISH Probe**

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

Summary & Explanation:
The ROS1 (6q22) Break Apart FISH probe is designed to detect a chromosomal rearrangement involving the ROS1 gene located on chromosome 6q22. The ROS1 gene encodes a tyrosine kinase receptor. Chromosomal rearrangements involving ROS1 have been implicated in multiple cancer indications (1,2) and has been identified as an oncogenic driver in non-small cell lung cancer (3). Preclinical data indicates that tumors harboring this genetic rearrangement are sensitive to Crizotinib, a ROS1 kinase inhibitor (1).

Principle of Procedure:
The ~470 kb probe labeled in orange flanks the centromeric end of the ROS1 gene and the ~579 kb probe labeled in green flanks the telomeric end of the ROS1 gene. When the probe is hybridized to a normal cell it will show two orange/green (yellow) fusion signal patterns. A cell containing a rearrangement of the ROS1 gene may show one orange, one green (separated) and one orange/green (yellow) fusion signal.



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:
ROS1 (6q22) 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:
OPPR7332 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: ROS1 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 Two Color 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.

ROS1 (6q22) Break Apart Orange/Green

FISH Probe
902-OPPR7332-020322

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 (4).

**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. Bergethon, Kristin, *et al.* "ROS1 Rearrangements Defines a Unique Molecular Class of Lung Cancers." *Journal of Clinical Oncology* (2012): 863-70.
2. Davies, Kurtis, *et al.* "Identifying and Targeting ROS1 Gene Fusion in Non-Small Cell Lung Cancer." *Human Cancer Biology* 18.17 (2012): 4570-579.
3. Stumpfova, M., P. A. Janne. "Zeroing in on ROS1 Rearrangements in Non-Small Cell Lung Cancer." *Clinical Cancer Research* (2012): 4222-224.
4. 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.