

IGH (14q32) Break Apart Orange/Green

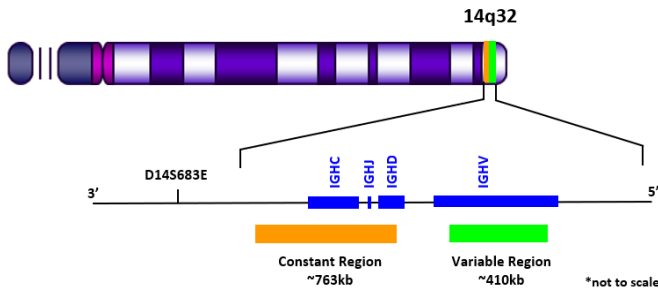
FISH Probe
902-OPPR7340-020322

Catalog Number: **OPPR7340 T30**
Description: **Prediluted FISH Probe**

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

Summary & Explanation:
The IGH (14q32) Break Apart probe is designed to detect chromosomal rearrangements involving the immunoglobulin heavy chain (IGH) gene on chromosome 14q32. To date, 43 different IGH chromosomal gene arrangement pairings have been identified (3). The majority of these chromosomal rearrangements can be detected using conventional cytogenetic techniques such as, fluorescence in situ hybridization (FISH). Multiple Myeloma (MM) and Non-Hodgkins lymphomas (NHL) are both characterized by recurrent chromosomal gene arrangements involving the IGH gene (1,2). The incidence of IGH gene rearrangements have been linked to MM pathogenesis and contribute to both the clinical and morphological features associated with NHL subtypes (1,2).

Principle of Procedure:
The IGH (14q32) Orange Break Apart probe is designed to detect ~763kb of the IGH constant region, the green Break Apart probe detects ~410kb of IGH Variable region. When the IGH (14q32) Break Apart probe is hybridized to a normal cell, it will show two orange/green (yellow) fusion signal patterns. In abnormal cell containing chromosomal rearrangements involving the IGH gene, the common observed pattern will show one orange, one green (separated) and one orange/green (yellow) 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:
IGH (14q32) 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.

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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 (OPRR6064K) 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:
OPPR7340 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: IGH BA 2CP
Protocol Template (Description): PathoFISH Template 1
Reagent Name, Time, Temp.: FISHzyme*, 35 min., 37°C

*FISHzyme (OPRR6066) is a part of ONCORE Pro FISH Kit (OPRR6064K).
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 (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. Sawyer, Jeffrey R. "The Prognostic Significance of Cytogenetics and Molecular Profiling in Multiple Myeloma." *Cancer Genetics* (2011): 3-12.
2. Bernicot, I., N. Douet-Guilbert, M.-J. Le Bris, A. Herry, F. Morel, and M. De Braekeleer. "Molecular Cytogenetics of IGH Rearrangements in Non-Hodgkin B-cell Lymphoma." *Cytogenetic and Genome Research* (2007): 345-52.
3. "IGH (Immunoglobulin Heavy)." IGH (Immunoglobulin Heavy). *Atlas of Genetics and Cytogenetics in Oncology and Haematology*. Web. <<http://atlasgeneticsoncology.org/Genes/IgHID40.html>>.
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.