IGH (14q32) Break Apart Orange/Green

FISH Probe
902-7020-102517

BIOCARE MEDICAL

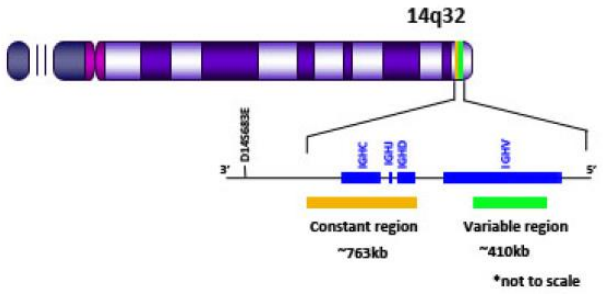
Catalog Number: PFR7020A
Description: IGH (14q32) Break Apart FISH Probe Orange/Green

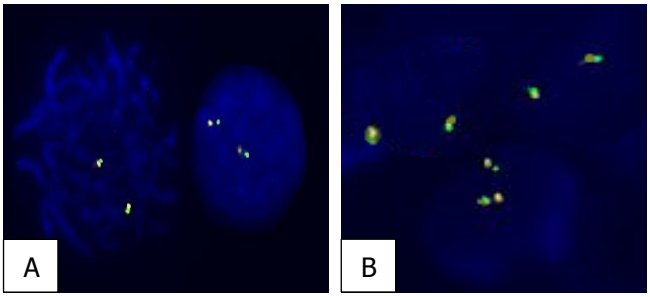
Dilution: Ready-to-use
Volume: 100 µL

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

Summary and 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.





(A) IGH (14q32) Break Apart (Orange/Green) probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. (B) IGH (14q32) Break Apart (Orange/Green) probe hybridized on prostate FFPE sample.

Species Reactivity: Human

Known Application:
Fluorescence In-situ Hybridization (FISH) on formalin-fixed paraffin-embedded (FFPE) tissues.
Supplied As: Probe in hybridization buffer.

Storage and Stability:
Store probe at -20ºC 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.

Technical Note:
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	498	522
ORANGE	537	556

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. 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].

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

Biocare Medical
60 Berry Drive
Pacheco, CA 94553
USA

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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.

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