

FGFR1 (8p11) Red + Copy Control 8 Green

FISH Probe
902-7016-102517

BIOCARE
M E D I C A L

Catalog Number: PFR7016A

Description: FGFR1 (8p11) Red + Copy Control 8 Green FISH Probe

Dilution: Ready-to-use

Volume: 100 µL

Intended Use:

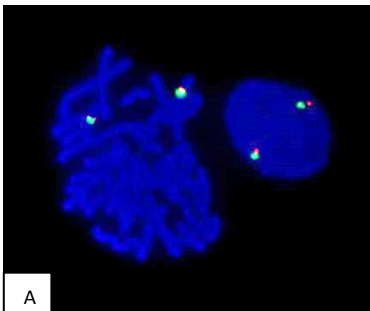
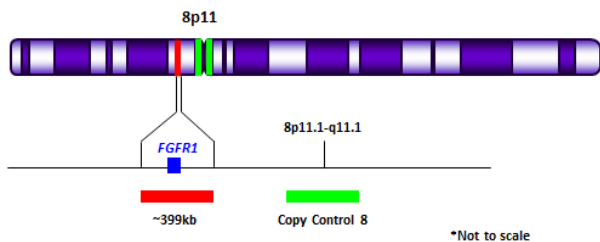
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

The FGFR1(8p11) Red+ Copy Control 8 Green probe is designed to detect copy number variations of the 8p11 region on chromosome 8. The fibroblast growth factor receptor (FGFR1) gene encodes a tyrosine kinase receptor and is responsible for cell growth and differentiation¹. FGFR1 gene aberrations have been associated with many types of cancers such as breast, prostate, kidney and lung cancers^{1, 2, 3}. Specifically, the amplification of the FGFR1 gene is believed to play a role in breast cancer carcinogenesis². Moreover, it has been stated that FGFR1 gene expression correlates with an increased Gleason score in prostate cancer³. The listed pathogenic features make FGFR1 a strong prognostic marker and viable therapeutic target in multiple cancer types.

Principle of Procedure:

The dual color FGFR1 (8p11) Red + Copy Control 8 Green FISH probe is designed to detect copy number alterations of FGFR1 and chromosome 8. The red probe covers ~399kb of the FGFR1 (8p11) region and the green probe is designed to bind to α -satellite DNA sequences located at the centromere region of chromosome 8.



(A)FGFR1 (8p11) + Copy Control 8 (Red/Green) probe hybridized on a normal cell will show two red and two green signals. Interphase and metaphase cellular state are shown.

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 -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.

Technical Note:

Biocare Medical dual 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 | 498 | 522 |
| RED | 592 | 628 |

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, which may be toxic. Formamide may cause serious eye damage or reproductive toxicity. It may also cause irritation by inhalation or skin contact. Avoid any direct contact exposure to reagent. Take appropriate protective measures (use disposable gloves, protective glasses, and lab garments). 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 water⁴.

Technical Support:

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

References:

1. Gru, Alejandro A, and D Craig Allred. "FGFR1 Amplification and the Progression of Non-invasive to Invasive Breast Cancer." *Breast Cancer Research Breast Cancer Res* (2012): 116. Print.
2. Cheng, Chee Leong, Aye Aye Thiike, Sie Yong Jane Tan, Pei Jou Chua, Boon Huat Bay, and Puay Hoon Tan. "Expression of FGFR1 Is an Independent Prognostic Factor in Triple-negative Breast Cancer." *Breast Cancer Res Treat Breast Cancer Research and Treatment* (2015): 99-111. Print.
3. Kwabi-Addo, B. "The Role of Fibroblast Growth Factors and Their Receptors in Prostate Cancer." *Endocrine Related Cancer* (2004): 709-24. Print.

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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.