

1q21.3 Orange/1p21.2 Green

FISH Probe
902-7044-102517

BIOCARE
M E D I C A L

Catalog Number: PFR7044A

Description: 1q21.3 Orange / 1p21.2 Green FISH Probe

Dilution: Ready-to-use

Volume: 100 µL

Intended Use:

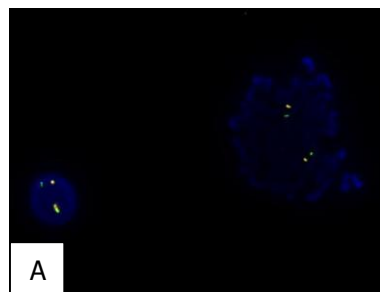
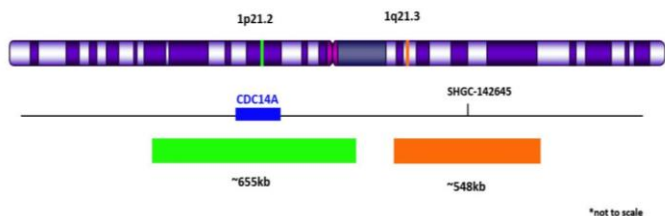
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

The 1q21.3 Orange /1p21.2 Green dual color probe is designed to detect chromosomal aberrations on chromosome 1. Chromosome 1 aberrations are some of the most commonly identified cytogenetic abnormalities observed in multiple myeloma cases, accounting for approximately 40% of the cytogenetic abnormalities identified^{1,2}. Specifically, gene copy number variations occurring within the 1q21.3 region on chromosome 1 have been associated with disease progression¹. Similarly, gene aberrations occurring within the 1p21.2 region on chromosome 1 are believed to have carcinogenic properties, and contribute to the disease phenotype¹. The clinical and biological features found in multiple myeloma are influenced by the cytogenetic abnormalities occurring at both 1p21.2 and 1q21.3 regions on chromosome 1, suggesting that together these biological features may serve as prognostic markers associated with multiple myeloma pathogenesis^{1,2}.


Principle of Procedure:

The 1q21.3 probe labeled in orange is ~548kb in size and is located on chromosome 1q21.3. The 1p21.2 probe labeled in green is ~655kb in size and is located on chromosome 1p21.2. Both probes are designed to detect copy number variations within their perspective regions.



(A) When the probe is hybridized to a normal cell it will show two orange and two green signals.

Species Reactivity: Human

 Biocare Medical
60 Berry Drive
Pacheco, CA 94553
USA

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
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, 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 water⁶.

Technical Support:

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

References:

1. Chang, Hong, Yi Ning, Xiaoying Qi, Joanna Yeung, and Wei Xu. "Chromosome 1p21 Deletion Is a Novel Prognostic Marker in Patients with Multiple Myeloma." *British Journal of Haematology Br J Haematol* (2007): 51-54. Print.
2. Chang, H., X. Qi, A. Jiang, W. Xu, Y. Trieu, and D. Reece. "1p21 Deletions Are Strongly Associated with 1q21 Gains and Are an Independent Adverse Prognostic Factor for the Outcome of High-dose Chemotherapy in Patients with Multiple Myeloma." *Bone Marrow Transplantation Bone Marrow Transplant* (2009): 215. Print.
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.