

IGH (14q32) Green/ CCND1 (11q13) Orange

FISH Probe
902-7017-102517

BIOCARE
M E D I C A L

Catalog Number: PFR7017A

Description: IGH (14q32) Green/ CCND1 (11q13) Orange FISH Probe

Dilution: Ready-to-use

Volume: 100 µL

Intended Use:

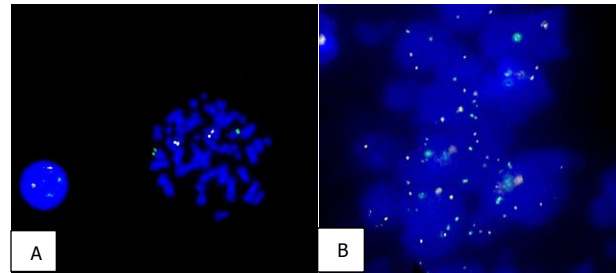
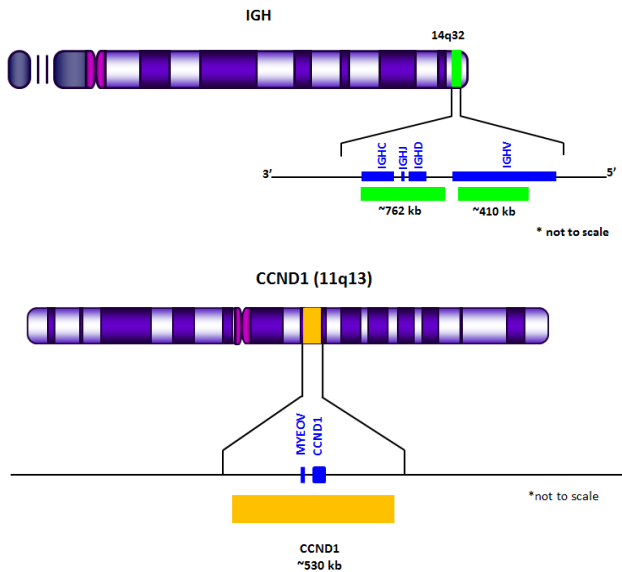
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

IGH gene rearrangements are considered to be one of the classical cytogenetic gene aberrations associated with numerous cancers such as: Chronic lymphocytic leukemia (CLL), Multiple Myeloma (MM), and Non-Hodgkin lymphoma^{1,2,3}. The t(11;14)(q13;q32) translocation results in the CCND1 gene being inserted into the heavy chain (IGH) locus resulting in over production cyclin D1 protein⁴. This is considered by many to be the hallmark cytogenetic event associated with mantle cell lymphoma.

Principle of Procedure:

The IGH (14q32) Green/ CCND1 (11q13) Orange FISH Probe is designed to provide coverage of the constant (~762kb) and variable (~410kb) regions of the IGH gene along with ~530kb of the CCND1(11q13) region of chromosome 11. A normal cell would show two orange and two green signals.



(A) IGH (14q32) Green/ CCND1 (11q13) Orange FISH probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. (B) IGH (14q32) Green/ CCND1 (11q13) Orange FISH FISH probe hybridized on FFPE tissue.

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 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	521
ORANGE	546	575

Precautions:

1. This product is Research Use Only.
2. It is the responsibility of the user to validate any test for its specific use.
3. 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).
4. 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 water⁸.
5. The SDS is available upon request and is located at <http://biocare.net/>.

Technical Support:

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

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References:

1. Cavazzini, Francesco, Lara Rizzotto, Olga Sofritti, Giulia Daghia, Francesca Cibien, Sara Martinelli, Maria Ciccone, Elena Saccenti, Melissa Dabusti, Abbas Awad Elkareem, Antonella Bardi, Elisa Tammiso, Antonio Cuneo, and Gian Matteo Rigolin. "Clonal Evolution including 14q32/translocations in Chronic Lymphocytic Leukemia: Analysis of Clinicobiologic Correlations in 105 Patients." *Leukemia & Lymphoma* (2011): 83-88.
2. Moreau, P. "Recurrent 14q32 Translocations Determine the Prognosis of Multiple Myeloma, Especially in Patients Receiving Intensive Chemotherapy." *Blood* (2002): 1579-583. Print.
3. Aamot, Hege Vangstein, Merete Bjornslett, Jan Delabie, and Sverre Heim. "T(14;22)(q32;q11) in Non-Hodgkin Lymphoma and Myeloid Leukaemia: Molecular Cytogenetic Investigations." *British Journal of Haematology* (2005): 845-51.
4. Aventín, Nomdedéu, Briones, Espinosa, Bordes, and Sierra. Insertion of the CCND1 gene into the IgH locus in a case of leukaemic small cell mantle lymphoma with normal chromosomes 11 and 14. *J Clin Pathol* 2003;56:798–800
5. 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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