

# TP53 (17p13) Orange + Copy Control 17 Green

FISH Probe  
902-7036-102517

**BIOCARE**  
M E D I C A L

**Catalog Number:** PFR7036A

**Description:** TP53 (17p13) Orange + Copy Control 17 Green FISH Probe

**Dilution:** Ready-to-use  
**Volume:** 100 µL

## Intended Use:

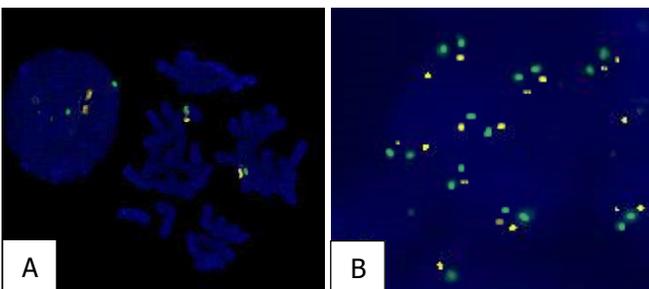
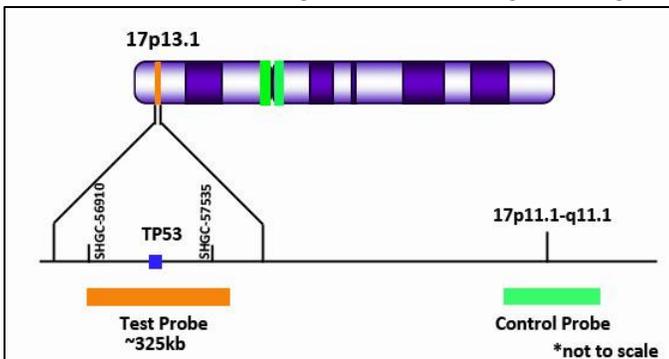
For Research Use Only. Not for use in diagnostic procedures.

## Summary and Explanation:

The p53 tumor suppressor protein is encoded by the TP53 gene located on chromosome 17p13. Under normal conditions the TP53 gene functions as a safeguard in maintaining cellular homeostasis<sup>1</sup>. Furthermore, the TP53 gene regulates suppressive mechanisms that mediate cell cycle arrest, senescence and apoptosis<sup>1</sup>. Chromosomal abnormalities involving the TP53 gene are associated with several hematological cancers<sup>1</sup>. TP53 gene deletions have been commonly identified in both multiple myeloma (MM) and chronic lymphocytic leukemia (CLL) patients<sup>1,2</sup>. Regarded as a prognostic marker, TP53 gene deletions are identified in approximately 10% of MM patients and in 5-10% of CLL patients<sup>1,2</sup>. Conventional cytogenetic techniques such FISH can be used to identify TP53 deletion with high accuracy.

## Principle of Procedure:

The TP53 (17p13) Orange + Copy Control 17 Green FISH probe is designed to hybridize to ~325kb of the TP53(17p13) region and to the α-satellite centromeric region of chromosome 17. A normal cell would show two orange and two green signals.



(A) TP53 (17p13) Orange + Copy Control 17 Green FISH probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. (B) TP53 (17p13) Orange + Copy Control 17 Green FISH probe hybridized on cervical 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 -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 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<sup>3</sup>.

## Technical Support:

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

## References:

1. Teoh, P.J, and W.J. Chng. "P53 Abnormalities and Potential Therapeutic Targeting in Multiple Myeloma." *BioMed Research International* (2014): 1-9.
2. Shindiaipina, Polina, Jennifer R. Brown, and Alexey V. Danilov. "A New Hope: Novel Therapeutic Approaches to Treatment of Chronic Lymphocytic Leukemia with Defects in TP53." *British Journal of Hematology* (2014): 149-61.
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.

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