

# PTEN del-TECT™ Four Color

FISH Probe  
902-7032-102517

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M E D I C A L

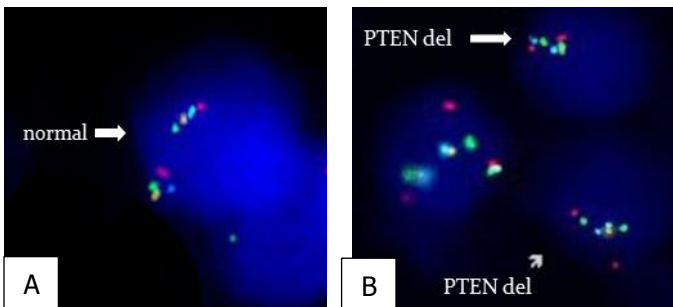
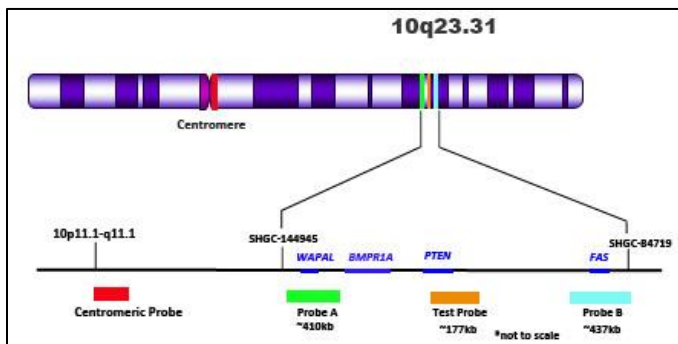
**Catalog Number:** PFR7032 A  
**Description:** PTEN del-TECT™ Four Color FISH Probe  
**Dilution:** Ready-to-use  
**Volume:** 100 µL

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

**Summary and Explanation:**  
The PTEN (Phosphatase and Tensin) gene encodes a phosphatase which counteracts the PI3K/Akt signaling pathway. It is involved in the regulation of DNA repair, genomic instability, stem cell self-renewal, cellular senescence, and cell migration<sup>1</sup>.

**Principle of Procedure:**  
The PTEN del-TECT (4 Color) FISH probe greatly increases the reliability of deletion detection, significantly decreasing the number of false-positive events<sup>2</sup> caused by cell truncation, an artifact of FFPE tissue processing. The PTEN Test probe is labeled in Orange and detects deletions of the PTEN gene. Probe A (WAPAL/BMPRI1A) is located centromeric to the test probe and is labeled in green. Probe B (FAS) is located telomeric to the test probe and is labeled in aqua.

The combination of the three colored probes (green, orange and aqua) in close proximity assists not only in eliminating the possibility of truncation of this region, but also in determining the actual size of the deletion. The centromere 10 probe labeled in red is included to help determine if chromosome 10 monosomies or polysomies are present.



(A) PTEN del-TECT (4 Color) FISH probe hybridized on normal prostate FFPE tissue. (B) PTEN del-TECT (4 Color) FISH probe hybridized on abnormal prostate 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 Four 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) |
|-------------|-----------------|---------------|
| AQUA        | 434             | 481           |
| GREEN       | 498             | 522           |
| ORANGE      | 537             | 556           |
| 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 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>4</sup>.

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

**References:**

1. Yoshimoto M, Cutz J-C, Nuin PAS, Joshua AM, Bayani J, Evans AJ, Zielenska M, Squire JA. Interphase FISH Analysis of PTEN in Histologic Sections Shows Genomic Deletions are Present in 68% of Primary Prostate Cancer and 23% of High-Grade Prostatic Intra-Epithelial Neoplasia. Cancer Genetics and Cytogenetics 169:128-37, 2006.
2. Yoshimoto M, Cunha IW, Coudry RA, Fonseca FP, Torres CH, Soares FA, Squire JA. FISH analysis of 107 prostate cancers shows that PTEN genomic deletion is associated with poor clinical outcome. British Journal of Cancer 97(5):678-85, 2007.
3. Yoshimoto M, Cunha IW, Coudry RA, Joshua A, FP Fonseca, Zielenska M, Soares FA, Squire JA. Absence of TMPRSS2:ERG fusions and PTEN losses identifies prostate

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cancer genomic grade with favorable outcome. Modern Pathology Epub ahead of print, 2008.

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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