

# PIK3CA (3q26.3) Orange + Copy Control 3 Green

FISH Probe  
902-7031-102517

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

**Catalog Number:** PFR7031A  
**Description:** PIK3CA (3q26.3) Orange + Copy Control 3 Green FISH Probe  
**Dilution:** Ready-to-use  
**Volume:** 100 µL

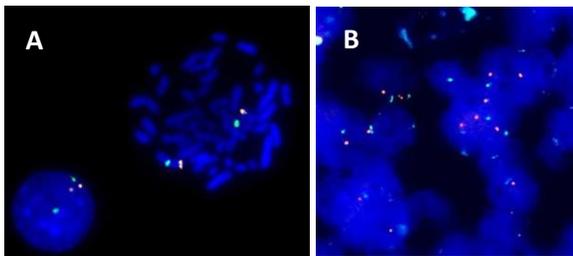
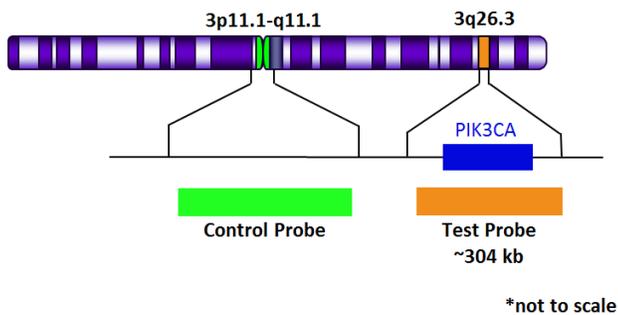
**Intended Use:**  
For Research Use Only. Not for use in diagnostic procedures.

## Summary and Explanation:

PIK3CA mutations have been discovered in many cancers including, colon, breast, endometrial, brain, skin, gastric, lung and thyroid<sup>1,2</sup>. Extensive studies have led researchers to believe that PIK3CA is one of the most commonly mutated oncogenes in human cancers<sup>3</sup>. These amplification events can be readily identified using appropriate FISH probes.

## Principle of Procedure:

The PIK3CA (3q26.3) Orange Probe is designed to provide coverage of the 3q26.3 (~ 304 kb) region of chromosome 3. The Copy Control 3 Green Probe is to hybridize to human  $\alpha$ -satellite DNA sequences located at the centromere region of chromosome 3.



A) PIK3CA (3q26.3) Orange + Copy Control 3 Green FISH probe hybridized on normal blood sample. Interphase and metaphase cellular states 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 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	432	472
GREEN	498	521
ORANGE	546	575
RED	593	618

## Limitations:

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

## Technical Support:

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

## References:

1. High frequency of mutations of the PIK3CA gene in human cancers. Samuels Y, Wang Z, Bardelli A, Silliman N, Ptak J, Szabo S, Yan H, Gazdar A. Prostate Cancer Prostatic Dis. 2010 Dec;13(4):311-5. doi: 10.1038/pcan.2010.31. Epub 2010 Sep 7.
2. PIK3CA gene amplification in Japanese non-small cell lung cancer. Kawano O, Sasaki H, Okuda K, Yukiue H, Yokoyama T, Yano M, Fujii Y. Lung Cancer. 2007 Oct; 58(1):159-60.
3. Oncogenic Mutations of PIK3CA in Human Cancers. Yardena Samuels and Todd Waldman. Curr Top Microbiol Immunol. 2010; 347: 21-41.



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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.



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