NKX/MYC del-TECT™ Four Color

FISH Probe
902-OPPR7329-020322

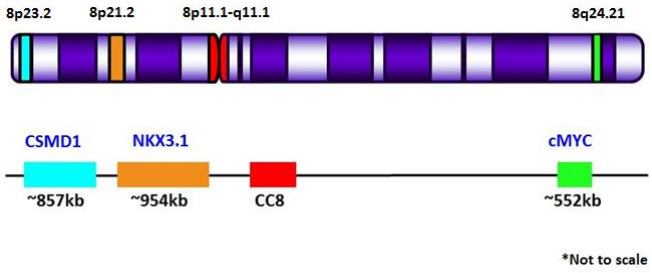
Catalog Number: **OPPR7329 T30**

Description: **Prediluted FISH Probe**

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

Summary & Explanation:
NKX is a prostate-specific tumor suppressor gene and loss of a single allele may predispose to prostate carcinogenesis (1). Studies have shown that the onset of MYC overexpression and the subsequent development of prostatic intraepithelial neoplasia coincide with this reduction in NKX (2). Over-expression of MYC has been reported as an early oncogenic event driving prostatic cancer progression (3). Data shows that NKX expression is highly, but not exclusively, specific for the prostate. Loss of NKX3.1 expression is strongly associated with hormone-refractory disease and advanced tumor stage in prostate cancer (4).

Principle of Procedure:
The NKX3.1 Orange Probe is designed to provide coverage of the 8p21.2 (~ 954 kb) region of chromsome 8. The MYC Green Probe is designed to provide coverage of the 8q24.21 (~ 552 kb) region of chromosome 8. The CSMD1 Aqua Probe is designed to provide coverage of the 8p23.2 (~ 857 kb) region of chromosome 8. The Copy Control 8 Red Probe is designed to provide coverage of the region alpha satellite region of chromosome 8.



Species Reactivity: Human

Known Application: Fluorescence In-situ Hybridization (FISH) on formalin-fixed paraffin-embedded (FFPE) tissues

Supplied As: Probe in hybridization buffer

Reconstitution, Dilution and Mixing:
NKX/MYC del-TECT™ Four Color FISH Probe is provided ready-to-use.
Bring the vial to room temperature 30 minutes prior to EACH use and MIX WELL by shaking vigorously by hand for 3 minutes in different orientations. If vial volume is 1mL or less, mix using a pipette for 20 aspirations.

Materials and Reagents Required but Not Provided:
Reagents and materials, such as detection kits and ancillary reagents are not provided. Refer to the ONCORE Pro FISH Kit (OPRR6064K) and the ONCORE Pro ISH Dewax Kit (OPRI6020K) datasheets. DAPI (120ng/mL) solution is also required for counterstaining. Call Technical Support for additional information on reagents and instrument accessories.

Storage and Stability:
Store probe at -20ºC 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.

Instructions for Use:
OPPR7329 is intended for use with the ONCORE Pro. Refer to the User Manual for specific instructions for use. Protocol parameters in the Protocol Editor should be programmed as follows:
Protocol Name: NKX/MYC 4CP
Protocol Template (Description): PathoFISH Template 1
Reagent Name, Time, Temp: FISHzyme*, 35 min., 37°C

*FISHzyme (OPRR6066) is a part of ONCORE Pro FISH Kit (OPRR6064K).
Incubation time of FISHzyme may be adjusted based on the tissue type and tissue fixation.

Slides should be baked offline for 1 hour at 60°C prior to loading onto the instrument.

The ONCORE Pro Baking Slides Before Staining setting should be selected and set for 10 min at 60°C to improve tissue retention.
Post ONCORE Pro FISH staining processing:

1. Gently rinse slides in TBS buffer, followed by a gentle rinse in DI water.
2. Place the slide rack in a dark cabinet to air dry.
3. Apply 1-2 drops of Fluoro Care Mounting Media (FP001) under a suitable size coverslip, e.g., 22x40 mm.

Technical Notes:
1. FISH runs should not be delayed as the probe will separate.
2. 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	426	498
GREEN	490	515
ORANGE	546	575
RED	593	618

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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 (4).

Health Hazard **Irritant** **Corrosive (to skin)**

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

References:

1. Roles for Nkx3.1 in prostate development and cancer. Rajula Bhatia-Gaur, Annemarie A. Donjacour, Peter J. Sciavolino, Minjung Kim, Nishita Desai, et al.Genes Dev. 1999 Apr 15;13(8):966-77.
2. MYC Overexpression Induces Prostatic Intraepithelial Neoplasia and Loss of Nkx3.1 in Mouse Luminal Epithelial Cells. Tsuyoshi Iwata, Denise Schultz, Jessica Hicks, Gretchen K. Hubbard, Laura N. Mutton, et al. PLoS ONE 5(2): e9427. doi: 10.1371/journal.pone.0009427, (2010).
3. Overexpression of C-MYC oncogene in prostate cancer predicts biochemical recurrence. Hawksworth D1, Ravindranath L, Chen Y, Furusato B, Sesterhenn IA, McLeod DG, Srivastava S, Petrovics G. Prostate Cancer Prostatic Dis. 2010 Dec;13(4):311-5. doi: 10.1038/pcan.2010.31. Epub 2010 Sep 7
4. Loss of NKX3.1 Expression in Human Prostate Cancers Correlates with Tumor Progression. Cai Bowen, Lukas Bubendorf, H. James Voeller, Rebecca Slack, et al.Cancer Res November 1, 2000 60; 6111
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.
6. 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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