

NKX/MYC del-TECT Four Color

FISH Probe
902-7030-102517

BIOCARE
M E D I C A L

Catalog Number: PFR7030A
Description: NKX/MYC del-TECT Four Color FISH Probe
Dilution: Ready-to-use
Volume: 100 µL

Intended Use:

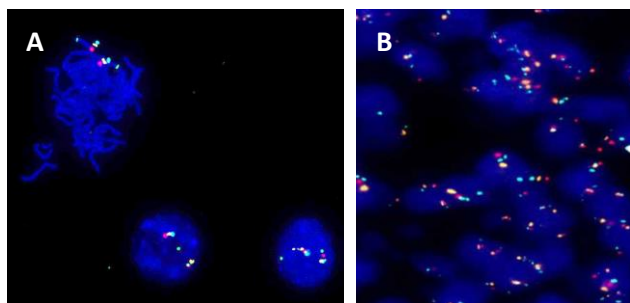
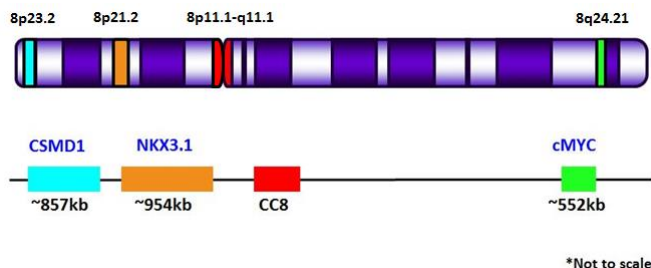
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

NKX is a prostate-specific tumor suppressor gene and loss of a single allele may predispose to prostate carcinogenesis¹. Studies have shown that the onset of MYC overexpression and the subsequent development of prostatic intraepithelial neoplasia coincide with this reduction in NKX². Over-expression of MYC has been reported as an early oncogenic event driving prostatic cancer progression³. 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 cancer⁴.

Principle of Procedure:

The NKX3.1 Orange Probe is designed to provide coverage of the 8p21.2 (~ 954 kb) region of chromosome 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.



A) NKX/MYC del-TECT Four Color FISH probe hybridized on a normal blood sample. Interphase and metaphase cellular states are shown. B) NKX/MYC del-TECT Four Color 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)
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 water⁵.
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.

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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.



60 Berry Drive
Pacheco, CA 94553
USA

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Tel: 800-799-9499 | www.biocare.net | Fax: 925-603-8080