

TERC (3q26.2)/ 5p15.2/ Copy Control 7 Tri-Color

FISH Probe
902-7319-102517

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M E D I C A L

Catalog Number: PFR7319A
Description: TERC (3q26.2)/ 5p15.2/ Copy Control 7 Tri-Color FISH Probe
Dilution: Ready-to-use
Volume: 100 µL

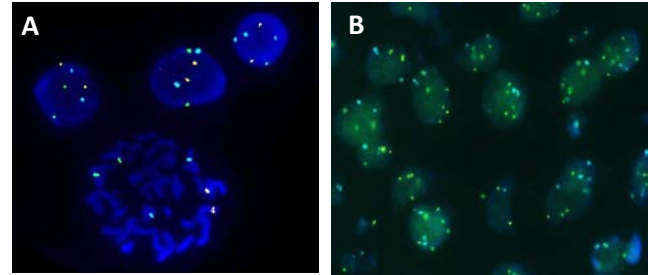
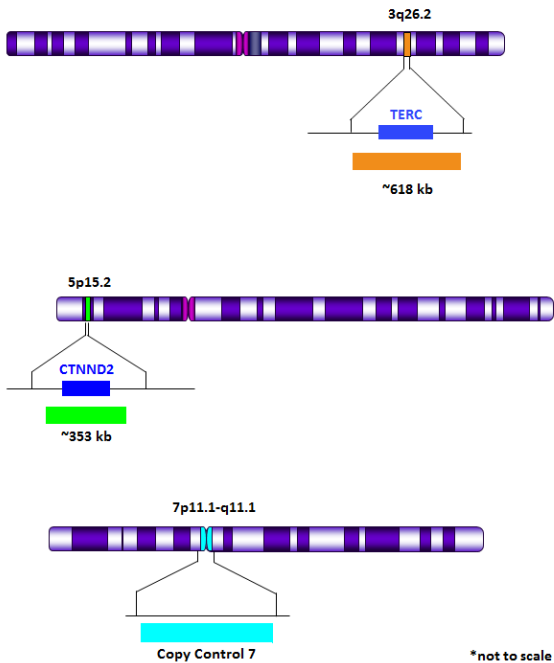
Intended Use:
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

During the malignant transformation of cervical squamous cells from normal to malignant there are two key events. The first is infection by high risk sub-types of the human papilloma virus (HPV), followed by chromosomal instability characterized by an increase in chromosome copy number (polysomy) and by TERC gene amplification. The genetic changes are associated with high-grade intraepithelial neoplasia and progression to invasive carcinoma¹. The use of FISH to detect TERC amplification has been shown to be an effective tool in a differential diagnosis of cervical disorders². High grade lesions have been reported to show amplification in up to 83% of cases vs approx. 43% of low grade cases³.

Principle of Procedure

The TERC (3q26.2) Probe is designed to provide coverage of the 3q26.2 (~618 kb) region of chromosome 3. The 5p15.2 Probe is designed to provide coverage of the 5p15.2 (~353 kb) region of chromosome 5. The Copy Control 7 Probe is designed to provide coverage of the 7p11.1-q11.1 region of chromosome 7. A normal cell would show two orange, two green, and two aqua signals.



A) TERC (3q26.2)/ 5p15.2/ Copy Control 7 Tri-Color FISH probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. (B) TERC (3q26.2)/ 5p15.2/ Copy Control 7 Tri-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

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contact with sensitive areas, wash with copious amounts of water⁴.

3. The SDS is available upon request and is located at <http://biocare.net>.

Technical Support:

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

References:

1. Genomic amplification of the human telomerase RNA gene for differential diagnosis of cervical disorders. Tu Z, Zhang A, Wu R, Jiang J, Li Y, Wulan N, Li J, Zhang Y, Li Y, Chen Z, Wei L. *Cancer Genet Cytogenet.* 2009 May;191(1):10-6
2. Tu Z, Zhang A, Wu R, Jiang J, Li Y, Wulan N, Li J, Zhang Y, Li Y, Chen Z, Wei L. Genomic amplification of the human telomerase RNA gene for differential diagnosis of cervical disorders. *Cancer Genet Cytogenet.* 2009;191:10-16.
3. Detection of TERC Amplification in Cervical Epithelial Cells for the Diagnosis of High-Grade Cervical Lesions and Invasive Cancer. A Multicenter Study in China. Jing Jiang, Li-Hui Wei, Ya-Li Li, Rui-Fang Wu, Xing Xie, You-Ji Feng, Guo Zhang, Chao Zhao, Yun Zhao, and Zhong Chen. *J Mol Diagn.* 2010 Nov; 12(6): 808-817.
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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