

TERC (3q26.2) Red/ 5p15.2 Green/ 20q13.2 Orange / CC10 Aqua Four Color

FISH Probe
902-7043-102517

BIOCARE
M E D I C A L

Catalog Number: PFR7043A

Description: TERC (3q26.2) Red/ 5p15.2 Green/ 20q13.2 Orange /CC10 Aqua Four Color FISH Probe

Dilution: Ready-to-use
Volume: 100 µL

Intended Use:

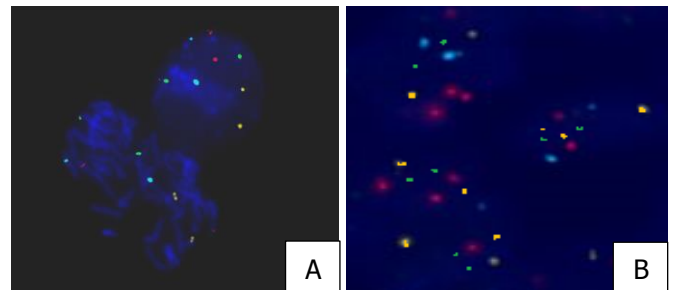
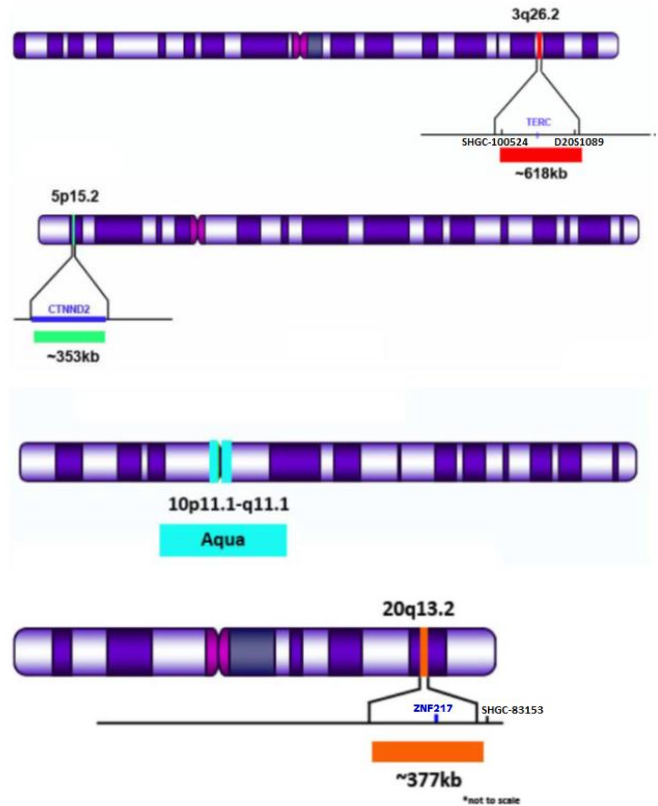
For Research Use Only. Not for use in diagnostic procedures.

Summary and Explanation:

Cervical cancer is one of the most common cancers affecting women worldwide. The implementation of cytogenetic based screening techniques has greatly reduced the incidence and mortality of cervical cancer in the United States¹. Moreover, traditional screening methods such as Pap smears and human papillomavirus (HPV) based testing are utilized to stratify and identify patients with high grade cervical cancer¹. Furthermore, the utilization of fluorescence in situ hybridization (FISH) HPV-cervical cancer based tests allow for the detection of several hallmark cytogenetic abnormalities commonly identified in cervical carcinoma^{1, 2, 3}. Specifically, chromosomal gains at TERC (3q26.2 ERC), 5p15.2, 20q13.2 and chromosomal losses at 10q are commonly associated with cervical cancer^{1, 2, 3}. Conventional cytogenetic techniques such as FISH can be used to detect these chromosomal abnormalities.

Principle of Procedure:

The TERC (3q26.2) Red/ 5p15.2 Green/ 20q13.2 Orange /Copy Control 10 Aqua FISH Probe directly labeled probe greatly increases the detection of these loci. The TERC (3q26.2) is labeled in red and spans a ~618 kb region. The 5p15.2 (CTNND2) probe is labeled in green and spans a ~353 kb region. The Copy Control (CC) 10 probe is labeled in aqua and targets the centromeric region of chromosome 10. The 20q13.2 probe is labeled in orange and spans a ~377 kb region.



(A) FISH Probe hybridized on normal blood sample. Interphase and metaphase cellular states are shown. (B) 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 at minus 20°C and away from light. Do not use after expiration date printed on vial. If probes are stored under conditions other than those specified in the package insert, they must be verified by the user. Any remaining probe should be stored at minus 20°C.

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Technical Note:

Biocare Medical Four Color FISH probes are optimized to provide the best signal performance using optical filter with spectral ranges specified below. Using filters outside these spectral ranges 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 water⁴.

Technical Support:

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

References:

1. Luhn, Patricia, Jane Houldsworth, Lynnette Cahill, Mark Schiffman, Philip E. Castle, Rosemary E. Zuna, S. Terence Dunn, Michael A. Gold, Joan Walker, and Nicolas Wentzensen. "Chromosomal Gains Measured in Cytology Samples from Women with Abnormal Cervical Screening Results." *Gynecologic Oncology* (2013): 1-16. Print.
2. Houldsworth, Jane. "FHACTION: The FISH-based HPV-associated Cancer Test That Detects Nonrandom Gain at Four Genomic Loci as Biomarkers of Disease Progression." *Diagnostic Profile* (2014). Print.
3. Wilting, Saskia M., Jillian De Wilde, Chris J. L. M. Meijer, Johannes Berkhof, Yajun Yi, Wessel N. Van Wieringen, Boudewijn J. M. Braakhuis, Gerrit A. Meijer, Bauke Ylstra, Peter J. F. Snijders, and Renske D. M. Steenbergen. "Integrated Genomic and Transcriptional Profiling Identifies Chromosomal Loci with Altered

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- Gene Expression in Cervical Cancer." *Genes, Chromosomes and Cancer* (2008): 890-905. Print.
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.