

## CytoFISH Multiplex FISH Probe

FISH Probe  
902-OPPR7344-020322

**Catalog Number:** OPPR7344 T30  
**Description:** Prediluted FISH Probe

### Intended Use:

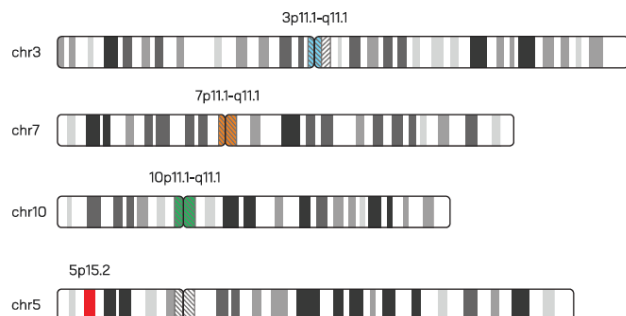
For Research Use Only. Not for use in diagnostic procedures.

### Summary & Explanation:

CytoFISH Multiplex probe is a cocktail of 4 individually fluorescently labeled probes: Copy Control 10 (green), Copy Control 7 (orange), Copy Control 3 (aqua), and 5p15.2 (red). Amplification at the 5p15.2 locus is strongly linked to high-grade, advanced-stage bladder tumors and rapid tumor cell proliferation in urinary cancer (1). Cytogenetic analysis demonstrated that 5p might be involved in translocations and/or formation of isochromosomes in a substantial number of bladder tumors (2). Gains at Chromosomes 3, 7, and 10 are seen more frequently in invasive urothelial tumors (3).

### Principle of Procedure:

CytoFISH Multiplex probe is designed to be used on cytological urine specimens in a fluorescent *in situ* hybridization (FISH) procedure. The Copy Control probes: 3 (aqua), 7 (orange) and 10 (green) are designed to hybridize to human  $\alpha$ -satellite DNA sequences located at the centromere region of chromosomes 3, 7 and 10, respectively. The 5p15.2 (red) probe is designed to hybridize to ~353 kb of the 5p15.2 region of chromosome 5.



**Species Reactivity:** Human

**Known Application:** Fluorescent *in situ* hybridization on cytological urine specimens

**Supplied As:** Probe in hybridization buffer.

### Reconstitution, Dilution and Mixing:

CytoFISH Multiplex 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 CytoFISH Kit (OPPR6068K) datasheet. Call Technical Support for additional information on reagents and instrument accessories.

DAPI (120ng/mL) solution is also required for counterstaining.

### 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.

### Instructions for Use:

OPPR7344 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:** CytoFISH 4CP

**Protocol Template (Description):** CytoFISH Template 1

**Reagent Name, Time, Temp:** FISHzyme\*, 10 min., 37°C

\*FISHzyme (OPPR6066) is a part of ONCORE Pro CytoFISH Kit (OPPR6077KT60).

The ONCORE Pro Baking Slides Before Staining setting is **NOT** recommended as it may adversely affect cell preparation.

Verify in System Utilities>Settings that the box next to "Baking Slides Before Staining" is NOT checked.

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. Empire Genomic Four Color FISH probe is 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

### 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 on our website [www.empiregenomics.com](http://www.empiregenomics.com).



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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 Empire Technical Support at +1.800.715.5880 for questions regarding this product.

### References:

1. TRIO Amplification and Abundant mRNA Expression Is Associated with Invasive Tumor Growth and Rapid Tumor Cell Proliferation in Urinary Bladder Cancer. Zheng, et al. Am J Pathol. 2004 Jul;165(1):63-9
2. Review of Chromosome Studies in Urological Tumors. II. Cytogenetics and Molecular Genetics of Bladder Cancer. Sandberg AA, Berger CS. J Urol. 1994 Mar;151(3):545-60
3. Molecular pathogenesis of bladder cancer. Knowles MA. Int J Clin Oncol. 2008 Aug;13(4):287-97
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.

