



*ZytoLight*  
**CEN X/Y Dual Color Probe**  
0.2 ml

For the detection of the **alpha-satellites of chromosome X** and the **satellite III region of chromosome Y** by fluorescence *in situ* hybridization (FISH)

FOR RESEARCH USE ONLY

Product No.: **Z-2016**

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Fluorescence labelled polynucleotide probe for the detection of human **chromosome X alpha-satellites** and **satellite III region of chromosome Y**, ready to use

## Product description

- Content:** 0.2 ml (20 reactions) **CEN X/Y Dual Color Probe** in hybridization buffer. The probe contains **green**-labelled polynucleotides (ZyGreen: excitation at 503 nm and emission at 528 nm - similar to FITC), which target the **satellite III region of chromosome Y**, and **orange**-labelled polynucleotides (ZyOrange: excitation at 547 nm and emission at 572 nm - similar to Rhodamine), which target **alpha-satellite-sequences of the centromere of chromosome X**.
- Product No.:** **Z-2016 (CEN X/Y Dual Color Probe)**
- Specificity:** The **CEN X/Y Dual Color Probe** is designed to be used for the detection of **satellite III region of chromosome Y** as well as **chromosome X alpha-satellites** in formalin-fixed, paraffin-embedded tissue or cells by *in situ* hybridization via FISH.
- Storage/Stability:** The **CEN X/Y Dual Color Probe** must be stored at -20°C in the dark (short-time storage at 4°C is possible) and is stable through the expiry date printed on the label.
- Use:** This product is designed for research purposes only and not for use in diagnostic applications.
- Safety Precautions:** Read the operating instructions prior to use!  
Do not use the reagents after the expiry date has been reached!  
This product contains substances (in low concentrations and volumes) that are harmful to health (formamide, kathon). Avoid any direct contact with the reagents. Take appropriate protective measures (use disposable gloves,

protective glasses and lab garments). The following risk and safety phrases apply to: R61 May cause harm to the unborn child. S53 Avoid exposure - obtain special instructions before use. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label, where possible)!

If reagents come into contact with skin, rinse skin immediately with copious quantities of water!

A material safety data sheet is available on request for the professional user!

### Principle of the method:

The presence of certain nucleic acid sequences in cells or tissues can be detected via *in situ* hybridization, using tagged DNA probes. The hybridization results in duplex formation of specific sequences present in the test object with the tagged DNA probe.

Duplex formation (with sequences of the [satellite III region of chromosome Y](#) and [chromosome X alpha-satellites](#) in the test material) is directly detected by using the tags of fluorescence-labelled polynucleotides.

### Instructions:

Before use, vortex the [CEN X/Y Dual Color Probe](#). Pre-treatment (dewaxing / proteolysis / post-fixation) should be carried according to the needs of the user. During the hybridization and wash steps, the test material must under no circumstances be allowed to dry out and the DNA probe should be kept out of bright light. For simultaneous denaturing of probe and target pipette 10  $\mu$ l of [CEN X/Y Dual Color Probe](#) onto the test material (distribute dropwise on the whole target area to avoid local concentration of probe), cover with a cover slip (22 mm x 22 mm), and seal with rubber cement. After heat denaturing, for example on a hot plate for 10 mins at 75°C ( $\pm$ 2°C), slides are incubated overnight at 37°C in a humidity chamber. Further processing, such as washing and counter-staining can be completed according to the users needs. For a particularly user-friendly performance we recommend the use of ZytoVision's hybridization system ([Z-2028](#)), which due to its compatibility, makes the technique even easier.

Our experts are available to answer your questions.

**Literature**

Coussens L et al. (1985) Science 230: 1132-9.

Slamon DJ et al. (1987) Science 235:177-82.

Way JS and Willard (1986) Nucleic Acids Res 14: 6915-27.

**Trademarks:**

ZytoVision<sup>®</sup> is a trademark of ZytoVision GmbH.

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