ZYTOVISION

ZytoDot
CEN 17 Probe

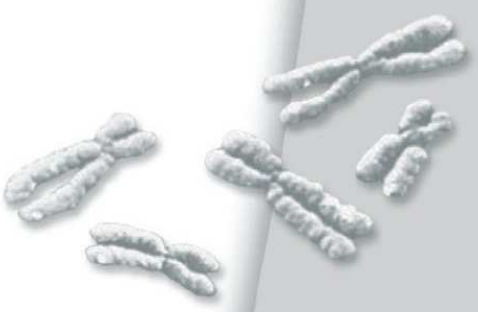
REF C-3006-400 Σ 40 (0.4 ml)

For the detection of human alpha-satellites of chromosome 17 by chromogenic *in situ* hybridization (CISH)

研究用です。診断用には使用できません

In vitro diagnostic medical device

according to EU directive 98/79/EC



人と科学のステキな未来へ

コスモ・バイオ株式会社

Digoxigenin-labeled polynucleotide probe for the detection of human alpha-satellites of chromosome 17 centromeres by CISH, ready to use

Product Description

Content: ZytoDot CEN 17 Probe **(PD3)** in hybridization buffer. The probe contains labeled polynucleotides (digoxigenylated) which target alpha-satellites-sequences of the centromere of chromosome 17.

Product: C-3006-400: 0.4 ml (40 reactions of 10 µl each)

Specificity: The ZytoDot CEN 17 Probe **(PD3)** is designed to be used for the detection of chromosome 17 alpha-satellites in formalin-fixed, paraffin-embedded tissue or cells by chromogenic *in situ* hybridization (CISH).

Storage/Stability: The ZytoDot CEN 17 Probe **(PD3)** must be stored at -16...-22°C (short-time storage at 2...8°C is possible) and is stable through the expiry date printed on the label.

Use: This product is designed for *in vitro* diagnostic use (according to EU directive 98/79/EC). Interpretation of results must be made within the context of the patient's clinical history with respect to further clinical and pathologic data of patient by a qualified pathologist!

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. Avoid any direct contact with the reagents. Take appropriate protective measures (use

disposable gloves, protective glasses, and lab garments)!

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 tissue can be detected by *in situ* hybridization using labeled DNA probes. The hybridization results in duplex formation of sequences present in the test object with the labeled DNA probe.

Duplex formation of the digoxigenin-labeled probe (with sequences of chromosome 17 alpha-satellites in the test material) can be visualized using a primary (unmarked) anti-digoxigenin antibody, which is detected by a secondary polymerized enzyme-conjugated antibody. The enzymatic reaction of a chromogenic substrate leads to the formation of a color precipitate that is visualized by light microscopy.

Instructions

Pre-treatment (dewaxing, proteolysis, post-fixation) should be carried out according to the needs of the user.

Denaturation and hybridization of probe:

1. Vortex the Zyto*Dot* CEN 17 Probe **(PD3)** and pipette 10 µl each onto individual samples

Distribute dropwise on the whole target area to avoid local concentration of probe. Alternatively, add probe to the center of a coverslip and place it upside down on target area. A gentle warming of the probe, as well as using a pipette tip, which has been cut off to increase the size of the opening, can make the pipetting process easier.

2. Avoiding trapped bubbles, cover the samples with a coverslip (22 mm x 22 mm; 24 mm x 32 mm). Seal the coverslip, e.g. with a layer of hot glue from an adhesive pistol or with rubber cement

3. Denature the slides at 94-95°C for 5 min, e.g. on a hot plate

4. Transfer the slides to a humidity chamber and hybridize overnight at 37°C (e.g. in a hybridization oven)

It is essential that the tissue/cell samples do not dry out during the hybridization step.

Further processing, such as washing, detection, and counter-staining, can be completed according to the user's needs. For a particularly user-friendly performance, we recommend the use of a Zyto*Dot* CISH system by ZytoVision. These systems were also used for the confirmation of appropriateness of the Zyto*Dot* CEN 17 Probe **(PD3)**.

Results

In an interphase nucleus of normal cells or cells without aberrations of chromosome 17, two chromosome 17 specific punctual signals appear which can be clearly distinguished from the background. In cells with an aneuploidy of chromosome 17, a different signal pattern is visible in interphases.

Due to mitosis, additional signals may be visible even in a small percentage of non-neoplastic cells. Occasionally, nuclei with missing signals may be observed in paraffin-embedded tissue sections.

In order to judge the specificity of the signals, every hybridization should be accompanied by controls. We recommend using at least one control sample in which the chromosome 17 copy number is known.

Our experts are available to answer your questions.

Literature

Isola J, Tanner M (2004) *Methods Mol Med* **97**: 133-44.

Speel EJ, et al. (1994) *J Histochem Cytochem* **42**: 1299-307.

Tsukamoto T, et al. (1991) *Int J Dev Biol* **35**: 25-32.

Waye JS, Willard HF (1987) *Nucleic Acids Res* **15**: 7549-69.

Wilkinson DG: In Situ Hybridization, A Practical Approach, *Oxford University Press* (1992) ISBN 0 19 963327 4.

As of: January 1, 2010 (4.5)

ZytoVision GmbH · Fischkai 1
D - 27572 Bremerhaven · Germany
Phone: +49 (0)471/4832 - 300
Fax: +49 (0)471/4832 - 509
www.zytovision.com
info@zytovision.com

Your local distributor