

# ZytoLight® SPEC 4p11/CEN 10/17 Triple Color Probe



## Background

The ZytoLight® SPEC 4p11/CEN 10/17 Triple Color Probe (PL261) is intended to be used for the qualitative detection of human chromosome 4p11 specific sequences as well as alpha satellites of chromosomes 10 and 17 in cytologic specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with the ZytoLight® FISH-Cytology Implementation Kit (Prod. No. Z-2099-20). The product is intended for professional use only. All tests using the product should be performed in a certified, licensed anatomic pathology laboratory under the supervision of a pathologist/human geneticist by qualified personnel. The probe is intended to be used as an aid to the differential diagnosis of various cancers and therapeutic measures should not be initiated based on the test result alone.

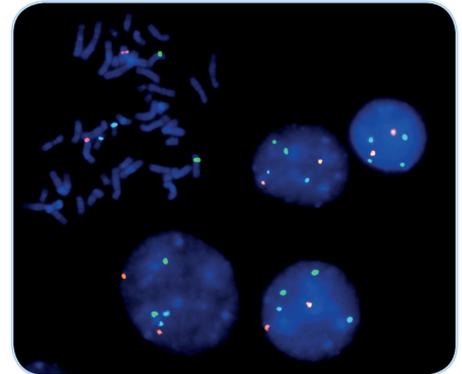
## Probe Description

The ZytoLight® SPEC 4p11/CEN 10/17 Triple Color Probe is composed of:

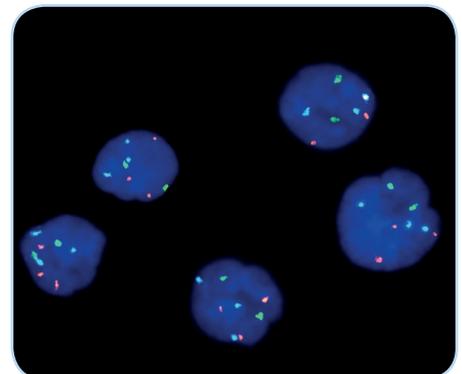
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 4p11\*\* (chr4:48,329,914-48,762,386).
- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 10p11.1-q11.1 specific for the alpha satellite centromeric region D10Z1 of chromosome 10.
- ZyBlue (excitation 418 nm/emission 467 nm) labeled polynucleotides (~12 ng/μl), which target sequences mapping in 17p11.1-q11.1 specific for the alpha satellite centromeric region D17Z1 of chromosome 17.
- Formamide based hybridization buffer

## Results

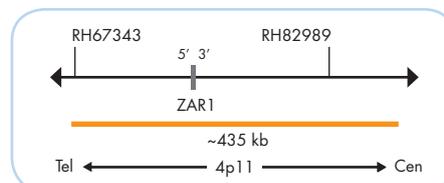
In a normal interphase nucleus, two orange, two green, and two blue signals are expected. In a cell with gain or loss of the chromosomes 4, 10 and/or 17, an increased or a reduced number of signals of the respective color will be observed.



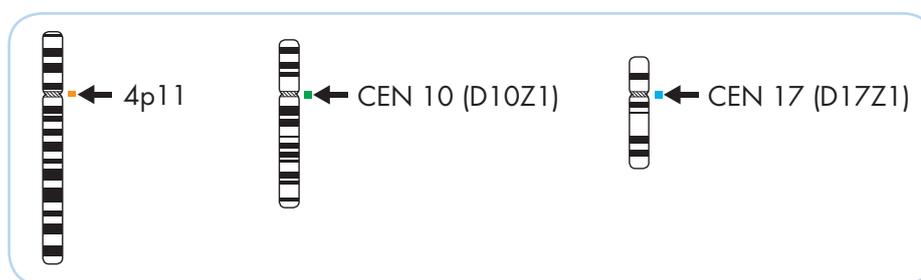
SPEC 4p11/CEN 10/17 Triple Color Probe hybridized to normal interphase cells as indicated by two orange, two green, and two blue signals in each nucleus and to metaphase chromosomes of a normal cell.



Example of an aberrant signal pattern: Bone marrow smear with trisomy of chromosome 4 and 17 as indicated by three orange and blue signals in each nucleus.



SPEC 4p11 Probe map (not to scale).



Ideograms of chromosomes 4, 10, and 17 indicating the hybridization locations.

Prod. No.	Product	Label	Tests* (Volume)
Z-2307-50	ZytoLight SPEC 4p11/CEN 10/17 Triple Color Probe		5 (50 μl)
<b>Related Products</b>			
Z-2099-20	ZytoLight FISH-Cytology Implementation Kit Incl. Cytology Pepsin Solution, 4 ml; 20x Wash Buffer TBS, 50 ml; 10x MgCl <sub>2</sub> , 50 ml; 10x PBS, 50 ml; Cytology Stringency Wash Buffer SSC, 500 ml; Cytology Wash Buffer SSC, 500 ml; DAPI/DuraTect-Solution, 0.8 ml		20

\* Using 10 μl probe solution per test. labeled products are only available in certain countries. All other countries research use only! Please contact your local dealer for more information.

\*\*According to Human Genome Assembly GRCh37/hg19