ZytoLight® SPEC FGFR2/CEN 10 Dual Color Probe

Intended Purpose

The Zyto*Light* SPEC FGFR2/CEN 10 Dual Color Probe (PL79) is intended to be used for the qualitative detection of amplifications involving the human FGFR2 gene as well as chromosome 10 alpha satellites in formalin-fixed, paraffin-embedded specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with the Zyto*Light* FISH-Tissue Implementation Kit (Prod. No. Z-2028-5/-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 Zyto*Light* SPEC FGFR2/CEN 10 Dual Color Probe is composed of:

- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10 ng/µl), which target sequences mapping in 10q26.12-q26.13* (chr10:122,908,224-123,682,373) harboring the FGFR2 gene region (see Fig. 1).
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~1.5 ng/µl), which target sequences mapping in 10p11.1-q11.1 specific for the alpha satellite centromeric region D10Z1 of chromosome 10.
- Formamide based hybridization buffer

* according to Human Genome Assembly GRCh37/hg19

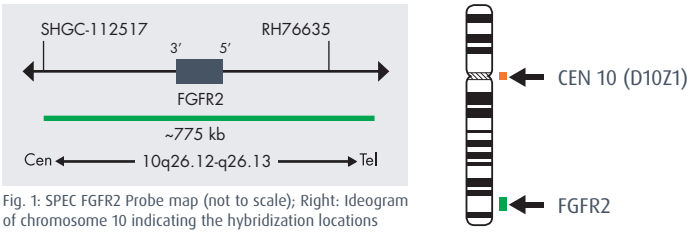
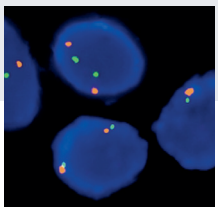


Fig. 1: SPEC FGFR2 Probe map (not to scale); Right: Ideogram of chromosome 10 indicating the hybridization locations

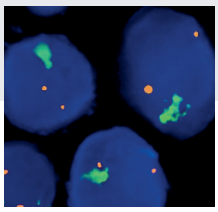
Results

Normal situation: In interphases of normal cells or cells without an amplification involving the FGFR2 gene region, two green signals and two orange signals appear.

Aberrant situation: In cells with an amplification of the FGFR2 gene region an increased number of green signals or green signal clusters will be observed.



Hybridized to normal interphase cells as indicated by two orange and two green signals in each nucleus.



Example of an aberrant signal pattern: Breast cancer tissue section with amplification of the FGFR2 gene as indicated by green signal clusters in each nucleus.

Labels	Chromosome	Reg. Status	Tests	Order No.
● | ●	10	CE/IVD	20 (200 µl)	**Z-2122-200**

ZytoLight® SPEC NUP98 Dual Color Break Apart Probe

Intended Purpose

The Zyto*Light* SPEC NUP98 Dual Color Break Apart Probe (PL223) is intended to be used for the qualitative detection of translocations involving the human NUP98 gene at 11p15.4 in cytologic specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with the Zyto*Light* 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 Zyto*Light* SPEC NUP98 Dual Color Break Apart Probe is composed of:

- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10,0 ng/µl), which target sequences mapping in 11p15.4-p15.5* (chr11:2,773,748-3,363,120) distal to the NUP98 breakpoint region (see Fig. 1).
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4,5 ng/µl), which target sequences mapping in 11p15.4* (chr11:3,829,054-4,142,792) proximal to the NUP98 breakpoint region (see Fig. 1).
- Formamide based hybridization buffer

* according to Human Genome Assembly GRCh37/hg19

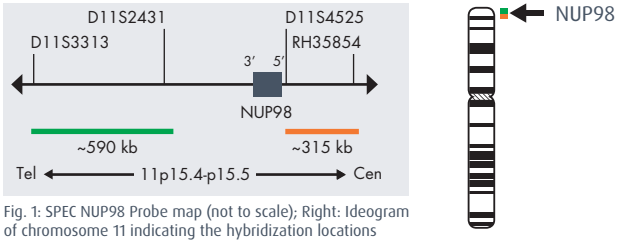
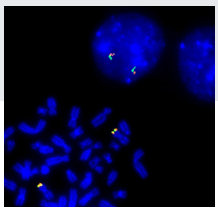


Fig. 1: SPEC NUP98 Probe map (not to scale); Right: Ideogram of chromosome 11 indicating the hybridization locations

Results

Normal situation: In interphases of normal cells or cells without a translocation involving the NUP98 gene region, two green/orange fusion signals appear. In specimens from normal tissue split signals have occasionally been observed. It is therefore important to define cut-off specifications carefully in order to avoid false positive results.

Aberrant situation: One NUP98 gene region affected by a translocation is indicated by one separate green signal and one separate orange signal.



Hybridized to normal interphase cells as indicated by two orange/green fusion signals per nucleus and to metaphase chromosomes of a normal cell.

Labels	Chromosome	Reg. Status	Tests	Order No.
● | ●	11	CE/IVD	5 (50 µl)	**Z-2266-50**