ZytoLight® SPEC IGL Dual Color Break Apart Probe

Intended Purpose

The Zyto*Light* SPEC IGL Dual Color Break Apart Probe (PL241) is intended to be used for the qualitative detection of translocations involving the human IGL locus at 22q11.22 in cytologic or formalin-fixed, paraffin-embedded specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with Zyto*Light* FISH Implementation Kits (Prod. No. Z-2028-5/-20, or 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 IGL 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 22q11.21-q11.22* (chr22:21,931,816-22,942,402) proximal to the IGL breakpoint region (see Fig.1).
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4,5 ng/µl), which target sequences mapping in 22q11.22-q11.23* (chr22:23,324,781-23,679,042) distal to the IGL breakpoint region (see Fig. 1).
- Formamide based hybridization buffer

* according to Human Genome Assembly GRCh37/hg19

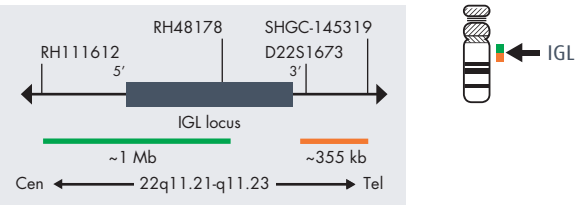
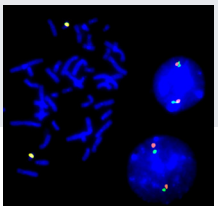


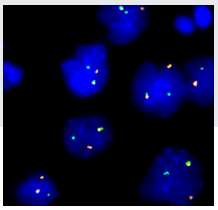
Fig. 1: SPEC IGL Probe map (not to scale); Right: Ideogram of chromosome 22 indicating the hybridization locations

Results

Normal situation: In interphases of normal cells or cells without a translocation involving the IGL locus, two green/orange fusion signals appear.
Aberrant situation: One IGL locus 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 in each nucleus and to metaphase chromosomes of a normal cell.



Example of an aberrant signal pattern: Cell line with an IGL translocation affecting the 22q11.21-q11.23 locus as indicated by one non-rearranged orange/green fusion signal, one orange signal, and one separate green signal.

Labels	Chromosome	Reg. Status	Tests	Order No.
●|●	22	CE/IVD	5 (50 µl)	**Z-2286-50**

ZytoLight® SPEC SMARCB1/22q12 Dual Color Probe

Intended Purpose

The Zyto*Light* SPEC SMARCB1/22q12 Dual Color Probe (PL137) is intended to be used for the qualitative detection of deletions involving the human SMARCB1 gene as well as the detection of chromosome 22q12 specific sequences 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 SMARCB1/22q12 Dual Color Probe is composed of:

- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10 ng/µl), which target sequences mapping in 22q11.23* (chr22:23,887,951-24,431,064) harboring the SMARCB1 gene region (see Fig. 1).
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4,5 ng/µl), which target sequences mapping in 22q12.1-22q12.2* (chr22:29,340,078-29,673,440) (see Fig. 1).
- Formamide based hybridization buffer

* according to Human Genome Assembly GRCh37/hg19

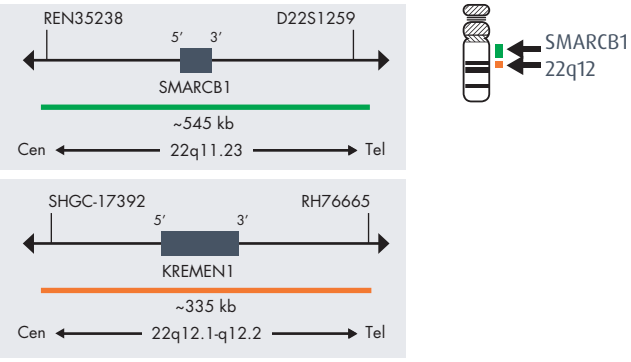
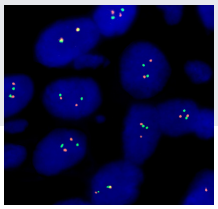


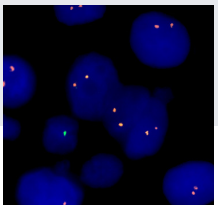
Fig. 1: Top: SPEC SMARCB1 Probe map; Bottom: SPEC 22q12 Probe map (not to scale); Right: Ideogram of chromosome 22 indicating the hybridization locations

Results

Normal situation: In interphases of normal cells or cells without a deletion involving the SMARCB1 gene region, two green and two orange signals appear.
Aberrant situation: In a cell with deletion affecting the SMARCB1 gene region, a reduced number of green signals will be observed. Deletions affecting only parts of the SMARCB1 gene region might result in a normal signal pattern with green signals of reduced size.



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



Example of an aberrant signal pattern: SPEC SMARCB1/22q12 Dual Color Probe hybridized to epithelioid sarcoma tissue section with biallelic deletion of the SMARCB1 gene as indicated by missing green signals in the nuclei.

Labels	Chromosome	Reg. Status	Tests	Order No.
●|●	22	CE/IVD	5 (50 µl)	**Z-2178-50**