

# ZytoLight® SPEC IGK Dual Color Break Apart Probe



## Background

The ZytoLight® SPEC IGK Dual Color Break Apart Probe (PL243) is intended to be used for the qualitative detection of translocations involving the human IGK locus at 2p11.2 in cytologic or formalin-fixed, paraffin-embedded specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with ZytoLight® 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.

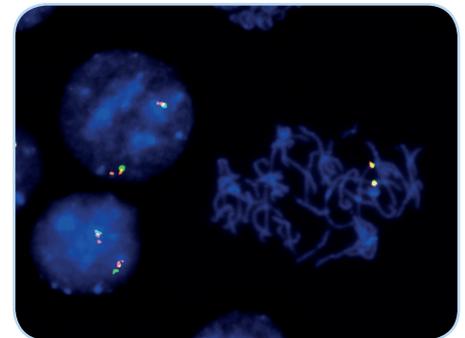
## Probe Description

The ZytoLight® SPEC IGK Dual Color Break Apart Probe is composed of:

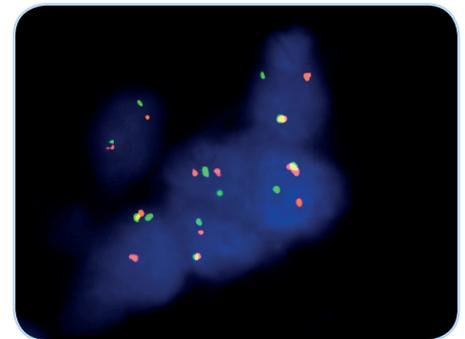
- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10.0 ng/µl), which target sequences mapping in 2p11.2\*\* (chr2:88,382,616-89,153,517) distal to the IGK breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/µl), which target sequences mapping in 2p11.2\*\* (chr2:89,246,977-89,609,390 and chr2:89,853,315-90,089,156) proximal to the IGK breakpoint region. Due to homologous sequence segments proximal to the IGK breakpoint region, the orange probe has two hybridization regions in close proximity.
- Formamide based hybridization buffer

## Results

In an interphase nucleus lacking a translocation involving the IGK locus at 2p11.2, two orange/green fusion signals are expected. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal indicates one normal IGK locus and one IGK locus affected by a translocation. Due to the two hybridization regions of the orange probe, orange signals may appear as paired signal dots.

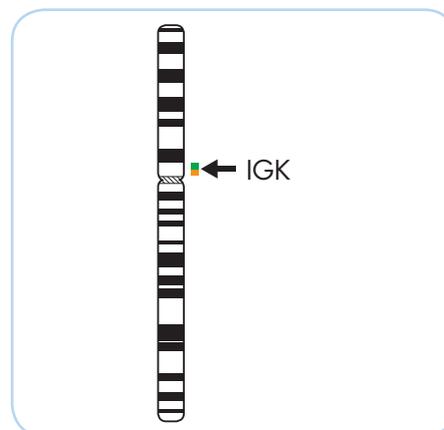


SPEC IGK Dual Color Break Apart Probe hybridized to normal interphase cells as indicated by two orange/green fusion signals in each nucleus and to metaphase chromosomes of a normal cell. Orange signals may appear as paired signal dots.

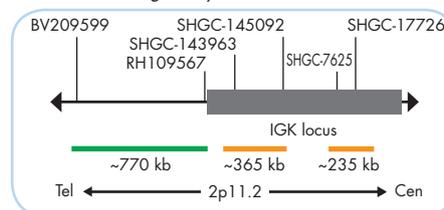


Example of an aberrant signal pattern: Burkitt lymphoma with an IGK translocation affecting the 2p11.2 locus as indicated by one non-rearranged orange/green fusion signal, one orange signal (may appear as paired signal dots), and one separate green signal.

Specimen kindly provided by Dr. Brändle, Vienna, Austria.



Ideogram of chromosome 2 indicating the hybridization locations.



SPEC IGK Probe map (not to scale).

Prod. No.	Product	Label	Tests* (Volume)
Z-2288-50	ZytoLight SPEC IGK Dual Color Break Apart Probe	●/●	5 (50 µl)
<b>Related Products</b>			
Z-2028-5	ZytoLight FISH-Tissue Implementation Kit Incl. Heat Pretreatment Solution Citric, 150 ml; Pepsin Solution, 1 ml; Wash Buffer SSC, 210 ml; 25x Wash Buffer A, 50 ml; DAPI/DuraTect-Solution, 0.2 ml		5
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