

# ZytoLight® SPEC EML4 Dual Color Break Apart Probe

RUO

## Background

The ZytoLight® SPEC EML4 Dual Color Break Apart Probe (PL93) is intended to be used for the qualitative detection of translocations involving the EML4 gene at 2p21 in formalin-fixed, paraffin-embedded specimens by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with the ZytoLight® FISH-Tissue Implementation Kit (Prod. No. Z-2028-5/-20).

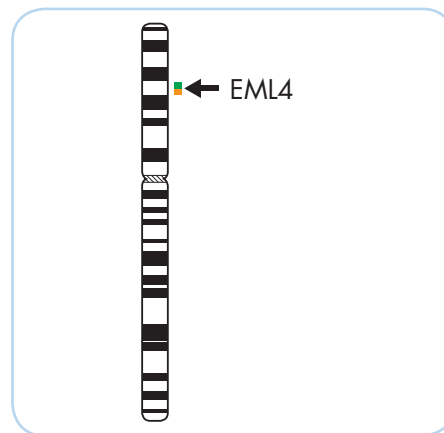
## Probe Description

The ZytoLight® SPEC EML4 Dual Color Break Apart Probe is composed of:

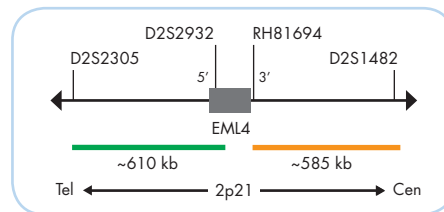
- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10 ng/μl), which target sequences mapping in 2p21\*\* (chr2:41,856,860-42,464,761) distal to the EML4 breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 2p21\*\* (chr2:42,576,262-43,163,545) proximal to the EML4 breakpoint region.
- Formamide based hybridization buffer

## Results

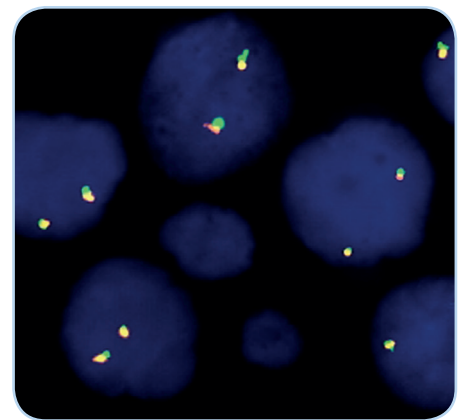
In an interphase nucleus of a normal cell lacking an inversion involving the 2p21 band, two orange/green fusion signals are expected representing two normal (non-rearranged) 2p21 loci. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal indicates one normal 2p21 locus and one 2p21 locus affected by an inversion or translocation.



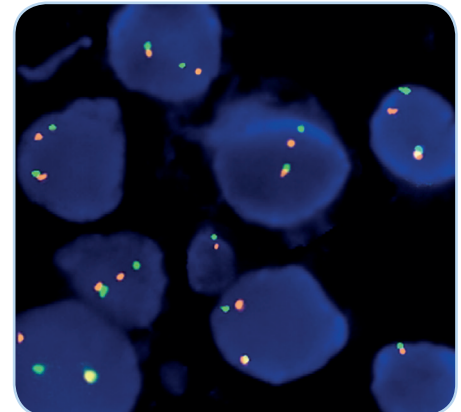
Ideogram of chromosome 2 indicating the hybridization locations.



SPEC EML4 Probe map (not to scale).



SPEC EML4 Dual Color Break Apart Probe hybridized to normal interphase cells as indicated by two orange/green fusion signals per nucleus.



Example of an aberrant signal pattern: NSCLC tissue section with inversion affecting the EML4 locus at 2p21 as indicated by one orange/green fusion (non-rearranged) signal, one green signal, and one separate orange signal.

Prod. No. Product

Z-2136-50 ZytoLight SPEC EML4 Dual Color Break Apart Probe RUO

Label

●/●

Tests\* (Volume)

5 (50 μl)

\* Using 10 μl probe solution per test. \*\*According to Human Genome Assembly GRCh37/hg19

RUO For Research Use Only. Not for use in diagnostic procedures.