

ZytoMation® ROS1 Dual Color Break Apart FISH Probe



Background

The ZytoMation® ROS1 Dual Color Break Apart FISH Probe (PL251) is intended to be used for the qualitative detection of translocations involving the human ROS1 gene at 6q22.1 in formalin-fixed, paraffin-embedded specimens, such as non-small cell lung cancer (NSCLC), by fluorescence *in situ* hybridization (FISH). The probe is intended to be used in combination with the Bond FISH Kit (DS9636) on the automated Bond-MAX or Bond III system by Leica Biosystems. 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 NSCLC and therapeutic measures should not be initiated based on the test result alone.

Probe Description

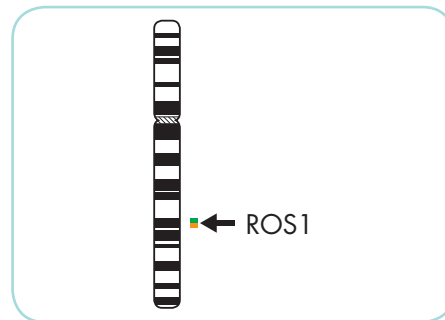
The ZytoMation® ROS1 Dual Color Break Apart FISH Probe is composed of:

- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~6.0 ng/μl), which target sequences mapping in 6q22.1** (chr6:116,912,298-117,627,255) proximal to the ROS1 breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~2.5 ng/μl), which target sequences mapping in 6q22.1** (chr6:117,659,135-117,871,701) distal to the ROS1 breakpoint region.
- Formamide based hybridization buffer

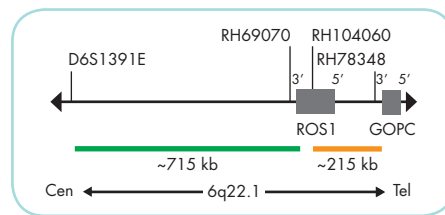
Results

In an interphase nucleus lacking an aberration involving the 6q22.1 band, two orange/green fusion signals are expected representing two normal (non-rearranged) 6q22.1 loci. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal indicates one normal 6q22.1 locus and one 6q22.1 locus affected by a translocation.

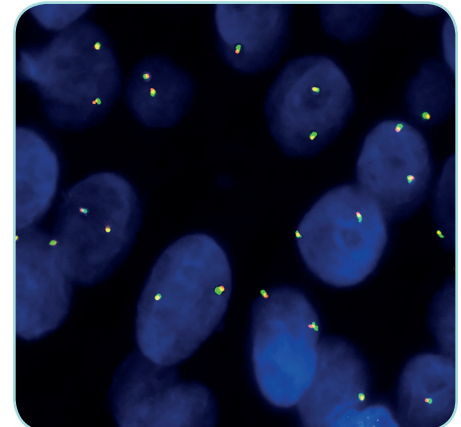
Isolated green signals are the result of deletions distal to the ROS1 breakpoint region or are due to unbalanced translocations affecting this chromosomal region.



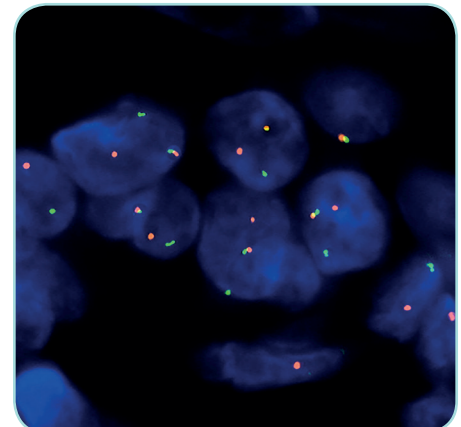
Ideogram of chromosome 6 indicating the hybridization locations.



ROS1 Probe map (not to scale).



ROS1 Dual Color Break Apart FISH Probe hybridized to normal interphase cells as indicated by two orange/green fusion signals per nucleus.



Lung cancer tissue section with translocation of the ROS1 gene as indicated by one non-rearranged orange/green fusion signal, one orange and one separate green signal.

Prod. No. Product

Z-2298-5.1ML ZytoMation ROS1 Dual Color Break Apart FISH Probe CE IVD

Label Tests* (Volume)

●/● up to 20 (5.1 ml)

* Using 240 μl probe solution per test. IVD 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