

# ZytoLight® SPEC NTRK2 Dual Color Break Apart Probe



## Background

The ZytoLight® SPEC NTRK2 Dual Color Break Apart Probe (PL163) is intended to be used for the qualitative detection of translocations involving the human NTRK2 gene at 9q21.33 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).

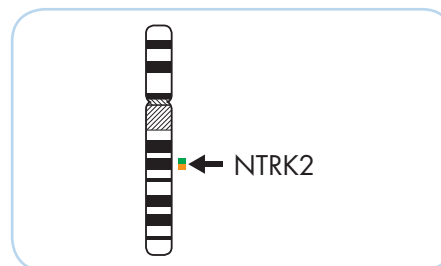
The product is intended for professional use only. All tests using the product should be performed in a certified, licensed anatomic pathology laboratory under the supervision of a pathologist/human geneticist by qualified personnel.

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.

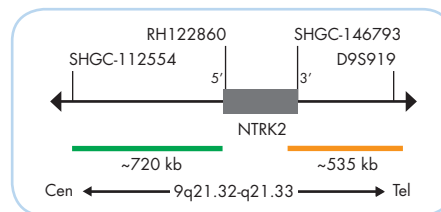
## Probe Description

The ZytoLight® SPEC NTRK2 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 9q21.32-q21.33\*\* (chr9:86,569,621-87,287,312) proximal to the NTRK2 breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 9q21.33\*\* (chr9:87,589,037-88,124,082) distal to the NTRK2 breakpoint region.
- Formamide based hybridization buffer



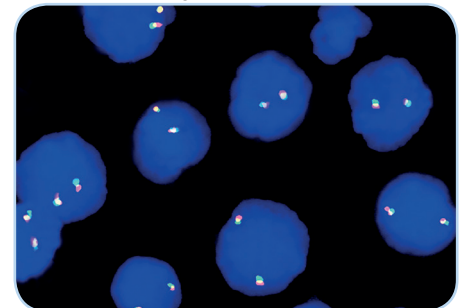
Ideogram of chromosome 9 indicating the hybridization locations.



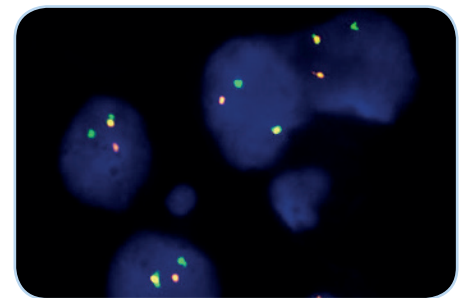
SPEC NTRK2 Probe map (not to scale).

## Results

In an interphase nucleus of a normal cell lacking a translocation involving the 9q21.32-q21.33 band, two orange/green fusion signals are expected representing two normal (non-rearranged) 9q21.32-q21.33 loci. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal indicates one normal 9q21.32-q21.33 locus and one 9q21.32-q21.33 locus affected by a translocation. Isolated orange signals are the result of deletions proximal to the NTRK2 breakpoint region or are due to unbalanced translocations affecting this chromosomal region.



SPEC NTRK2 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: Peritoneal carcinoma tissue section with rearrangement of the NTRK2 gene as indicated by one non-rearranged orange/green fusion signal, one orange, and one separate green signal.

Kindly provided by the Institute of Pathology, University Medical Center Göttingen, Germany.

| Prod. No.        | Product   | Label | Tests* (Volume) |
|------------------|---|-------|-----------------|
| Z-2205-50        | ZytoLight SPEC NTRK2 Dual Color Break Apart Probe CE IVD  | ●/●   | 5 (50 μl)       |
| Z-2205-200       | ZytoLight SPEC NTRK2 Dual Color Break Apart Probe CE IVD  | ●/●   | 20 (200 μl)     |
| Related Products |   |       |                 |
| Z-2028-5         | ZytoLight FISH-Tissue Implementation Kit CE IVD<br>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-2028-20        | ZytoLight FISH-Tissue Implementation Kit CE IVD<br>Incl. Heat Pretreatment Solution Citric, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 560 ml; 25x Wash Buffer A, 100 ml; DAPI/DuraTect-Solution, 0.8 ml |       | 20              |

\* Using 10 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