

# ZytoLight® SPEC EWSR1/FLI1 TriCheck™ Probe



## Background

The ZytoLight® SPEC EWSR1/FLI1 TriCheck™ Probe (PL141) is intended to be used for the qualitative detection of rearrangements involving the human EWSR1 gene at 22q12.2 and the human FLI1 gene at 11q24.3 in formalin-fixed, paraffin-embedded specimens, such as Ewing sarcoma, 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 Ewing sarcoma and therapeutic measures should not be initiated based on the test result alone.

## Probe Description

The ZytoLight® SPEC EWSR1/FLI1 TriCheck™ Probe is composed of:

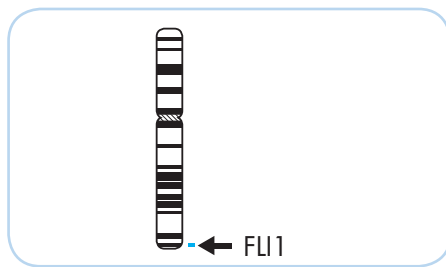
- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10 ng/μl), which target sequences mapping in 22q12.2\*\* (chr22:29,779,841-30,179,900) distal to the EWSR1 breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 22q12.1-q12.2\*\* (chr22:29,191,431-29,673,440) proximal to the EWSR1 breakpoint region.
- ZyBlue (excitation at 418 nm and emission 467 nm) labeled polynucleotides (~37 ng/μl), which target sequences mapping in 11q24.3\*\* (chr11:128,707,454-129,346,602) distal to the FLI1 breakpoint region.
- Formamide based hybridization buffer

## Results

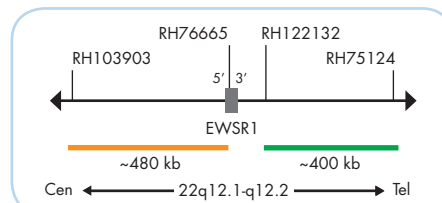
In an interphase nucleus without FLI1-EWSR1 rearrangement, two green/orange fusion signals and two blue signals are expected.

A FLI1-EWSR1 fusion is indicated by one separate orange signal co-localizing with one blue signal and one separate green signal.

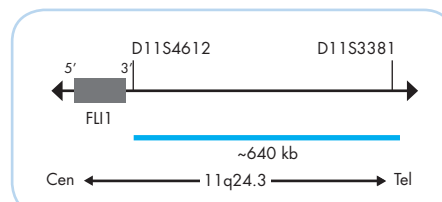
An EWSR1 translocation without involvement of FLI1 is indicated by the split of one green/orange fusion signal without co-localization of the separated orange signal with one blue signal.



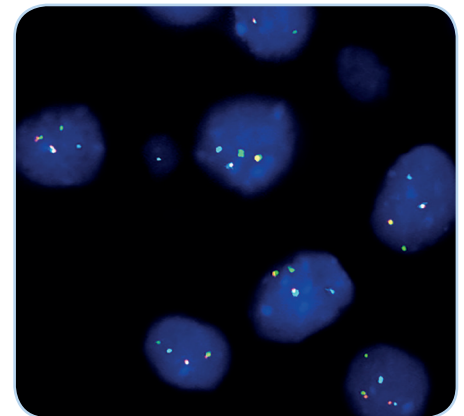
Ideograms of chromosomes 22 (above) and 11 (below) indicating the hybridization locations.



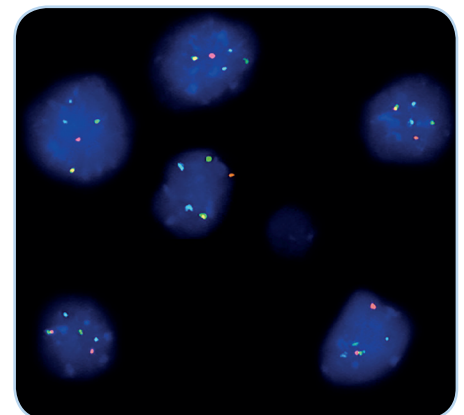
SPEC EWSR1 Probe map (not to scale).



SPEC FLI1 Probe map (not to scale).



Ewing sarcoma tissue section with FLI1-EWSR1 fusion as indicated by orange/blue fusion signals.



Ewing sarcoma tissue section with a non-FLI1 EWSR1 rearrangement as indicated by the lack of co-localization of the separated orange signal with one blue signal.

Prod. No.	Product	Label	Tests* (Volume)
Z-2183-50	ZytoLight SPEC EWSR1/FLI1 TriCheck Probe		5 (50 μl)
<b>Related Products</b>			
Z-2028-5	ZytoLight FISH-Tissue Implementation Kit		5
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			

\* 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