

ZytoLight® SPEC FOXO1/PAX3 TriCheck™ Probe



Background

The ZytoLight® SPEC FOXO1/PAX3 TriCheck™ Probe (PL143) is intended to be used for the qualitative detection of rearrangements involving the human FOXO1 gene at 13q14.11 and the human PAX3 gene at 2q36.1 in formalin-fixed, paraffin-embedded specimens, such as alveolar rhabdomyosarcoma (ARMS), 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 ARMS and therapeutic measures should not be initiated based on the test result alone.

Probe Description

The ZytoLight® SPEC FOXO1/PAX3 TriCheck™ Probe is composed of:

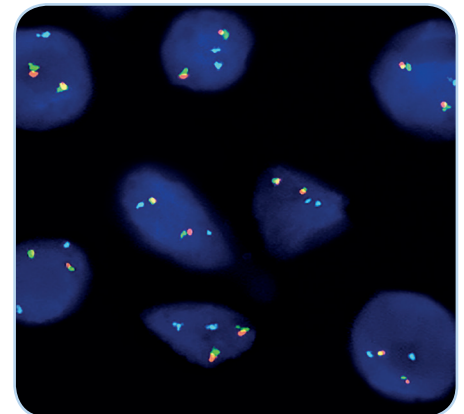
- ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~10 ng/μl), which target sequences mapping in 13q14.11** (chr13:41,246,917-42,054,781) distal to the FOXO1 breakpoint region.
- ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~4.5 ng/μl), which target sequences mapping in 13q14.11** (chr13:40,578,036-41,132,595) proximal to the FOXO1 breakpoint region.
- ZyBlue (excitation at 418 nm and emission 467 nm) labeled polynucleotides (~37 ng/μl), which target sequences mapping in 2q36.1** (chr2:223,196,078-223,936,825) distal to the PAX3 breakpoint region.
- Formamide based hybridization buffer

Results

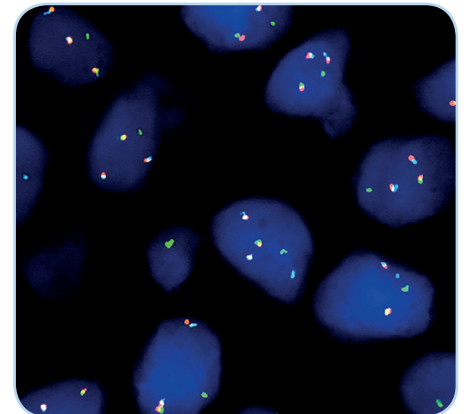
In an interphase nucleus without PAX3-FOXO1 rearrangement, two green/orange fusion signals and two blue signals are expected.

A PAX3-FOXO1 fusion is indicated by one separate orange signal co-localizing with one blue signal and one separate green signal.

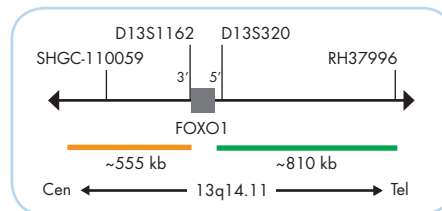
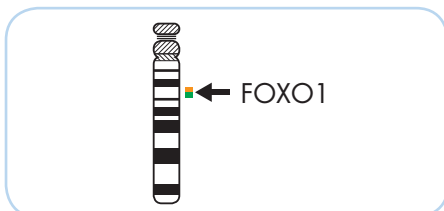
A FOXO1 translocation without involvement of PAX3 is indicated by the split of one green/orange fusion signal without co-localization of the separated orange signal with one blue signal.



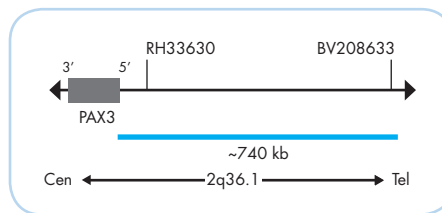
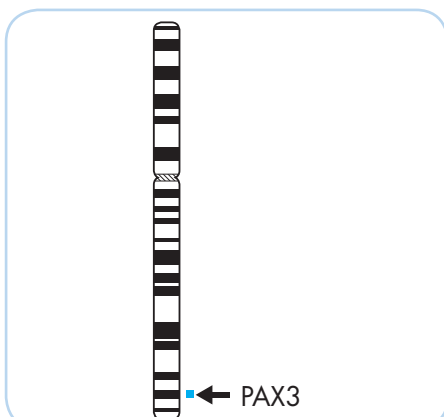
SPEC FOXO1/PAX3 TriCheck™ Probe hybridized to normal interphase cells as indicated by two orange/green fusion signals and two blue signals per nucleus.



ARMS tissue section with PAX3-FOXO1 fusion as indicated by orange/blue fusion signals.



SPEC FOXO1 Probe map (not to scale).



SPEC PAX3 Probe map (not to scale).

Ideograms of chromosomes 13 (above) and 2 (below) indicating the hybridization locations.

Prod. No.	Product	Label	Tests* (Volume)
Z-2185-50	ZytoLight SPEC FOXO1/PAX3 TriCheck Probe CE IVD	●/●/●	5 (50 μl)
Related Products			
Z-2028-5	ZytoLight FISH-Tissue Implementation Kit CE IVD		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. 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