**ZytoLight® SPEC JAZF1 Dual Color Break Apart Probe**

**Background**

The ZytoLight® SPEC JAZF1 Dual Color Break Apart Probe is designed to detect translocations involving the chromosomal region 7p15.1-p15.2 harboring the JAZF1 (JAZF zinc finger 1) gene. Translocations involving the region 7p15.1-p15.2 are frequently found in endometrial stromal sarcoma (ESS). The most common cytogenetic abnormality detected in 33-80% of ESS is t(7;17) (p15.1-p15.2;q11.2) which results in the fusion of the JAZF1 gene at 7p15.1-p15.2 to the JJAZ1 (Joined to JAZF1; a.k.a. SUZ12) gene at 17q11.2. Both genes involved contain zinc finger domains characteristic for DNA binding proteins. It was shown that the fusion protein JAZF1-JJAZ1 can promote cell proliferation when the wild-type JJAZ1 is silenced as it is in ESS harboring the t(7;17).

In 25-30% of ESS the JAZF1 gene is disrupted by another translocation t(6;7) where the first zinc finger domain of JAZF1 is fused to both zinc finger domains of the PHF1 (PHD finger protein 1) gene at 6p21.32. As a result the entire coding region of PHF1 is regulated by the JAZF1 promoter.

Since the diagnosis of ESS is often difficult in cases showing diverse histological differentiation or in undifferentiated endometrial sarcoma (UES), the detection of the JAZF1 translocations can serve as a diagnostic tool to confirm the diagnosis of ESS.

**Probe Description**

The SPEC JAZF1 Dual Color Break Apart Probe is a mixture of two direct labeled probes hybridizing to the 7p15.1-p15.2 band. The orange fluorochrome direct labeled probe hybridizes proximal, the green fluorochrome direct labeled probe hybridizes distal to the JAZF1 breakpoint region.

**Results**

In an interphase nucleus lacking a translocation involving the 7p15.1-p15.2 band, two orange/green fusion signals are expected representing two normal (non-rearranged) 7p15.1-p15.2 loci. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal indicates one normal 7p15.1-p15.2 locus and one 7p15.1-p15.2 locus affected by a translocation.

**ZytoLight® FISH probes are direct labeled using the unique ZytoLight® Direct Label System II providing improved signal intensity. Advanced specificity of the single copy SPEC probes is obtained by the unique ZytoVision® Repeat Subtraction Technique.**

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**Prod. No.**  | **Product**  | **Label**  | **Tests* (Volume)**
---|---|---|---
Z-2132-50  | ZytoLight SPEC JAZF1 Dual Color Break Apart Probe  | CE  | 5 (50 μl)

**Related Products**

Z-2028-S  | ZytoLight FISH-Tissue Implementation Kit  | CE  | 5

Incl. Heat Pretreatment Solution Citric, 150 ml; Pepsin Solution, 1ml; Wash Buffer SSC, 210 ml; 25x Wash Buffer A, 50 ml; DAPI/DuraTect Solution, 0.2 ml

* Using 10 μl probe solution per test. CE only available in certain countries. All other countries research use only! Please contact your local dealer for more information.