ZytoLight® SPEC CDKN2A/CEN 9 Dual Color Probe

Previously: ZytoLight SPEC p16/CEN 9 Dual Color Probe

CE IVD

Background

The ZytoLight® SPEC CDKN2A/CEN 9 Dual Color Probe is designed for the detection of CDKN2A deletions frequently observed in most tumor cell lines as well as in primary human malignancies.
The CDKN2A gene, often referred to as p16 or INK4a/ARF, is located in the chromosomal region 9p21.3. Using alternative first exons and an alternative reading frame, the gene encodes for two distinct tumor suppressor proteins p16INK4a and p14ARF, both involved in cell cycle regulation. CDKN2A has been identified as a major susceptibility gene for melanoma. The tumor suppressor gene CDKN2A is inactivated by homozygous deletions with high frequency in a variety of human primary tumors e.g. bladder and renal cell carcinoma, prostate and ovarian adenocarcinoma, non-small cell lung cancer, sarcoma, glioma, mesothelioma, and melanoma. Furthermore, deletion of the CDKN2A gene is found in up to 80% of T-cell acute lymphoblastic leukemia cases and is associated with poor prognosis and relapse of the disease.

References
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Kamb A, et al. (1994) Science 264: 436-40.
Nobori T, et al. (1994) Nature 368: 753-6.
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Rocco JW & Sidransky D (2001) Exp Cell Res 264: 42-55.
Schoppmeyer K, et al. (1999) Neoplasia 1: 128-37.
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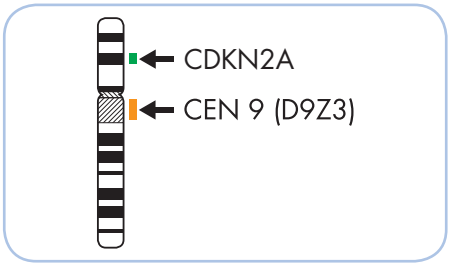
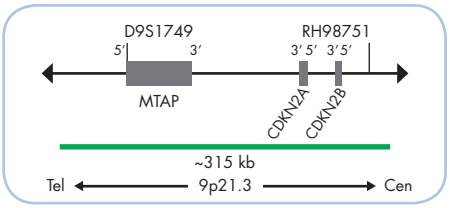
Probe Description

The SPEC CDKN2A/CEN 9 Dual Color Probe is a mixture of an orange fluorochrome direct labeled CEN 9 probe specific for the classical satellite III region of chromosome 9 (D9Z3) at 9q12 and a green fluorochrome direct labeled SPEC CDKN2A probe specific for the CDKN2A gene at 9p21.3.



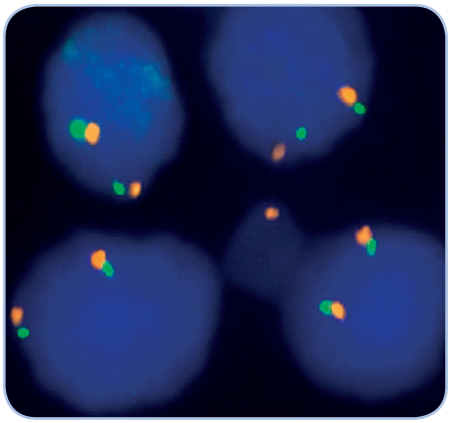
Ideogram of chromosome 9 indicating the hybridization locations.



SPEC CDKN2A Probe map (not to scale).

Results

In a normal interphase nucleus, two orange and two green signals are expected. In a cell with deletion of the CDKN2A gene locus, a reduced number of green signals will be observed. Deletions affecting only parts of the CDKN2A gene might result in a normal signal pattern with green signals of reduced size.



SPEC CDKN2A/CEN 9 Dual Color Probe hybridized to normal interphase cells as indicated by two orange and two green signals in each nucleus.

Prod. No.	Product	Label	Tests* (Volume)
Z-2063-50	ZytoLight SPEC CDKN2A/CEN 9 Dual Color Probe CE IVD	●/●	5 (50 µl)
Z-2063-200	ZytoLight SPEC CDKN2A/CEN 9 Dual Color Probe CE IVD	●/●	20 (200 µl)
Related Products			
Z-2028-5	ZytoLight FISH-Tissue Implementation Kit CE IVD Incl. Heat Pretreatment Solution Citric, 150 ml; Pepsin Solution, 1 ml; Wash Buffer SSC, 150 ml; 25x Wash Buffer A, 50 ml; DAPI/DuraTect-Solution, 0.2 ml		5
Z-2028-20	ZytoLight FISH-Tissue Implementation Kit CE IVD Incl. Heat Pretreatment Solution Citric, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 500 ml; 25x Wash Buffer A, 100 ml; DAPI/DuraTect-Solution, 0.8 ml		20
Z-2099-20	ZytoLight FISH-Cytology Implementation Kit CE IVD Incl. Cytology Pepsin Solution, 4 ml; 20x Wash Buffer TBS, 50 ml; 10x MgCl2, 50 ml; 10x PBS, 50 ml; Cytology Stringency Wash Buffer SSC, 500 ml; Cytology Wash Buffer SSC, 500 ml; DAPI/DuraTect-Solution, 0.8 ml		20

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

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.*

ZytoVision GmbH · Fischkai 1
27572 Bremerhaven · Germany
www.zytovision.com

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