ZytoLight® SPEC BCL2L1/CEN 20 Dual Color Probe

CE IVD

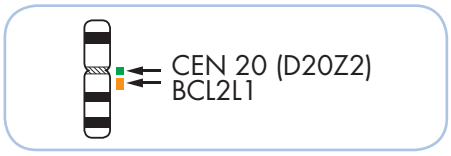
Background

The ZytoLight® SPEC BCL2L1/CEN 20 Dual Color Probe is designed for the detection of BCL2L1 gene amplifications.
The BCL2L1 (BCL2-like 1, a.k.a. BCLX) gene is located in the chromosomal region 20q11.21 and encodes for an anti-apoptotic protein that belongs to the BCL2 family. These genes are involved in a wide variety of cellular activities including lymphocyte development and hematopoiesis.
BCL2L1 amplifications have been reported in several human cancers including lung, ovarian breast, melanoma, and hematologic malignancies.
Overexpression of BCL2L1 reduces MYC-induced apoptosis in immortalized bronchial epithelial cells.
Furthermore, BCL2L1 amplifications are found in many tumor cell lines with resistance to chemotherapeutic agents.
Targeting the BCL2 family proteins with small non-peptidic compounds, so called BH3-mimetics, is currently investigated in clinical trials.
Hence, the identification of BCL2L1 amplifications by Fluorescence *in situ* Hybridization and the inhibition of BCL2L1 signaling may be of therapeutic significance in various types of tumors.

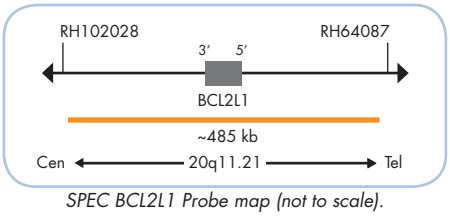
References
Beroukhim R, et al. (2010) Nature 463: 899-905.
Booher RN, et al. (2014) PloS One 9: e108371.
Sochalska M, et al. (2015) FEBS J 282: 834-49.
Yasui K, et al. (2004) Cancer Res 64: 1403-10.

Probe Description

The SPEC BCL2L1/CEN 20 Dual Color Probe is a mixture of an orange fluorochrome direct labeled SPEC BCL2L1 probe hybridizing to the BCL2L1 gene in the chromosomal region 20q11.21 and a green fluorochrome direct labeled CEN 20 probe specific for the alpha satellite centromeric region of chromosome 20 (D20Z2).



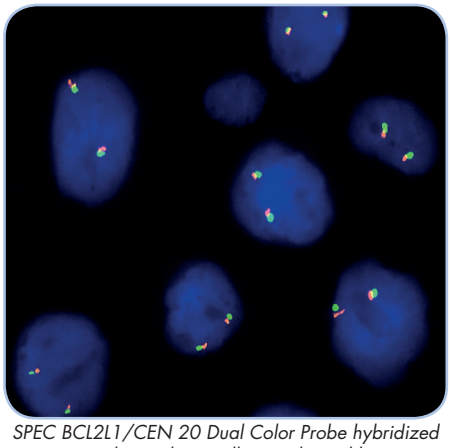
Ideogram of chromosome 20 indicating the hybridization locations.



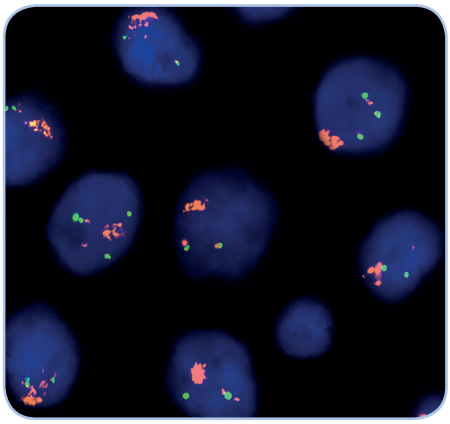
SPEC BCL2L1 Probe map (not to scale).

Results

In a normal interphase nucleus, two orange and two green signals are expected.
In a cell with amplification of the BCL2L1 gene locus, multiple copies of the orange signal or orange signal clusters will be observed.



SPEC BCL2L1/CEN 20 Dual Color Probe hybridized to normal interphase cells as indicated by two orange and two green signals in each nucleus.



SK-LU-1 cell line with interphase cells showing amplification of the BCL2L1 gene locus as indicated by orange signal clusters in each nucleus.

Prod. No.	Product	Label	Tests* (Volume)
Z-2171-200	ZytoLight SPEC BCL2L1/CEN 20 Dual Color Probe CE IVD	●/●	20 (200 µl)
Related Products			
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

** 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.*

FE106-1-16

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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