ZytoLight® SPEC 11q gain/loss Triple Color Probe

CE IVD

Background

The ZytoLight® SPEC 11q gain/loss Triple Color Probe is designed to detect 11q alterations.

A subset of lymphomas with gene expression and pathological characteristics of Burkitt lymphomas (BL) but absence of MYC translocation has been recently described which carries 11q proximal gains and telomeric losses. It is assumed that this aberration leads to co-deregulation of oncogenes and tumor suppressor genes which are located in the affected chromosomal regions. The current WHO classification introduced this new provisional entity as Burkitt-like lymphoma with 11q aberration. The minimal region of gain (MGR) and loss (MLR) was defined at 11q23.3 and at 11q24.1-q25, respectively, based on the studies by Ferreiro *et al.* (2015) and Salaverria *et al.* (2014). Potential oncogenes located in the MGR are USP2 and PAFAH1B2. The candidate tumor suppressor genes in the MLR comprise, e.g., FLI1 and ETS1.

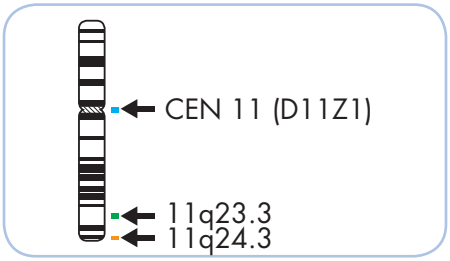
The 11q-gain/loss pattern in high-grade B-cell lymphoma is significantly more frequent in lymphoma occurring in the setting of transplantation and immunosuppression than in immunocompetent patients. This suggests that immunosuppression may favor its formation.

As identification of patients with the 11q-gain/loss aberration is clinically important but cytogenetically challenging, FISH assay is a useful diagnostic tool to evaluate both post-transplant and immunocompetent Burkitt and Burkitt-like lymphoma patients.

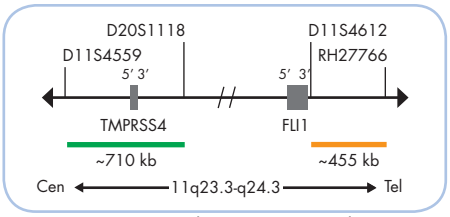
References
Ferreiro JF, et al. (2015) Haematologica 100: e275-9.
Salaverria I, et al. (2014) Blood 123: 1187-98.
Swerdlow SH, et al. (2016) Blood 127: 2375-90.

Probe Description

The SPEC 11q gain/loss Triple Color Probe is a mixture of a green fluorochrome direct labeled probe hybridizing in the MGR at 11q23.3, an orange fluorochrome direct labeled probe hybridizing in the MLR at 11q24.3, and a blue fluorochrome direct labeled CEN 11 probe specific for the alpha satellite centromeric region of chromosome 11 (D11Z1).



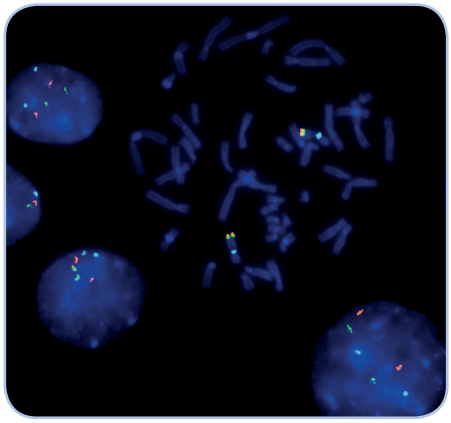
Ideogram of chromosome 11 indicating the hybridization locations.



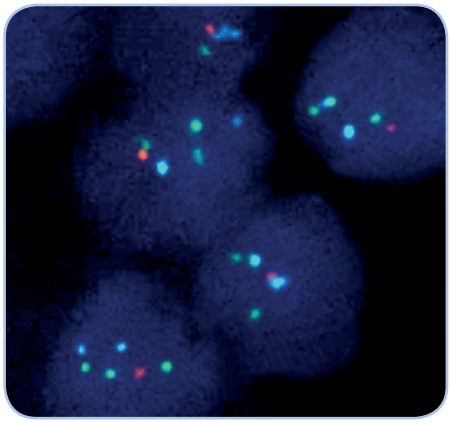
SPEC 11q Probe map (not to scale).

Results

In a normal interphase nucleus, two green, two orange, and two blue signals are expected. In a cell with amplification at 11q23.3 and deletion at 11q24.3, multiple copies of the green signals and a reduced number of orange signals will be observed.



SPEC 11q gain/loss Triple Color Probe hybridized to normal interphase cells as indicated by two green, two orange, and two blue signals per nucleus and to metaphase chromosomes of a normal cell.



Burkitt-like lymphoma tissue section with 11q aberration as indicated by three green signals and one orange signal indicating the gain and loss at 11q, respectively.

Prod. No.	Product	Label	Tests* (Volume)
Z-2216-50	ZytoLight SPEC 11q gain/loss Triple Color Probe CE IVD	●/●/●	5 (50 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

** 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.*

FE126-1-16

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.*

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

231