

ZytoLight® SPEC BCL6 Dual Color Break Apart Probe



Background

The ZytoLight® SPEC BCL6 Dual Color Break Apart Probe is designed for the detection of translocations involving the chromosomal region 3q27.3 harboring the BCL6 (B-cell CLL/lymphoma 6, a.k.a. ZNF51, LAZ3) gene.

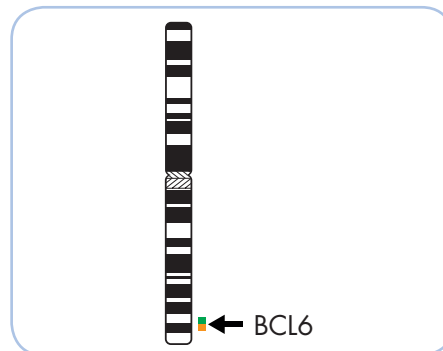
The BCL6 protein acts as a transcriptional repressor that is involved in the regulation of lymphoid development and function.

Chromosomal rearrangements of the BCL6 gene region were found to occur in different types of non-Hodgkin lymphoma (NHL), including diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma (FL). The most common BCL6 translocation t(3;14)(q27;q32) results in the IGH-BCL6 gene fusion. In addition, more than 20 partner loci have been identified including immunoglobulin (Ig) genes but also a number of non-Ig genes. As a result of these translocations, the rearranged BCL6 gene comes under the control of the promoter of the partner gene leading to deregulated expression of BCL6.

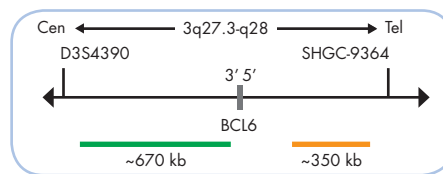
In DLBCL, the most common histologic subtype of NHL, BCL6 translocations represent one of the most frequent cytogenetic abnormality, occurring in 20% to 40% of the cases. Several studies reported a correlation of BCL6 translocation with an inferior overall survival. Moreover, DLBCL which are positive for both BCL6 and CMYC rearrangements have been shown to have an extremely poor prognosis. Hence, the detection of BCL6 rearrangements by Fluorescence *in situ* Hybridization may help in predicting the clinical outcome in patients with NHL.

Probe Description

The SPEC BCL6 Dual Color Break Apart Probe is a mixture of two direct labeled probes hybridizing to the 3q27.3-q28 band. The green fluorochrome direct labeled probe hybridizes at 3q27.3 proximal to the BCL6 gene, and the orange fluorochrome direct labeled probe hybridizes at 3q27.3-q28 distal to the BCL6 gene.



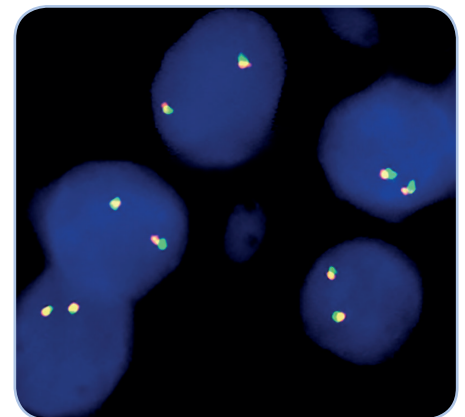
Ideogram of chromosome 3 indicating the hybridization locations.



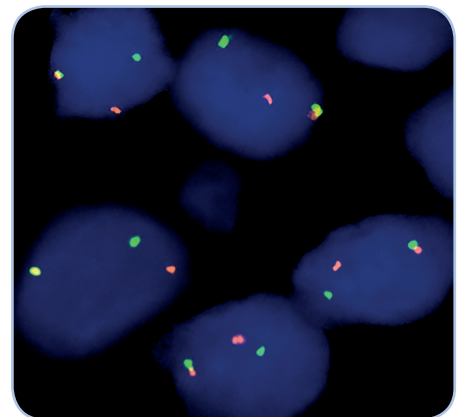
SPEC BCL6 Probe map (not to scale).

Results

In an interphase nucleus lacking a translocation involving the 3q27.3 band, two orange/green fusion signals are expected representing two normal (non-rearranged) 3q27.3 loci. A signal pattern consisting of one orange/green fusion signal, one orange signal, and a separate green signal indicates one normal 3q27.3 locus and one 3q27.3 locus affected by a translocation.



SPEC BCL6 Dual Color Break Apart Probe hybridized to normal interphase cells as indicated by two orange/green fusion signals per nucleus.



DLBCL tissue section with translocation of the BCL6 gene as indicated by one non-rearranged orange/green fusion signal, one orange, and one separate green signal indicating the translocation.

References

- Akyurek N, et al. (2012) Cancer 118: 4173-83.
- Cody FM, et al. (2008) J Clin Oncol 26: 4814-9.
- Ohno H (2004) Histol Histopathol 19: 637-50.
- Ohno H (2006) J Clin Exp Hematop 46: 43-53.



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Prod. No.	Product	Label	Tests* (Volume)
Z-2177-200	ZytoLight SPEC BCL6 Dual Color Break Apart Probe CE IVD	●/●	20 (200 µl)
Related Products			
Z-2028-20	ZytoLight FISH-Tissue Implementation Kit CE IVD		20
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			

* 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.