ZytoDot® 2C SPEC BCL6 Break Apart Probe

CE IVD

Background

The ZytoDot® 2C SPEC BCL6 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.

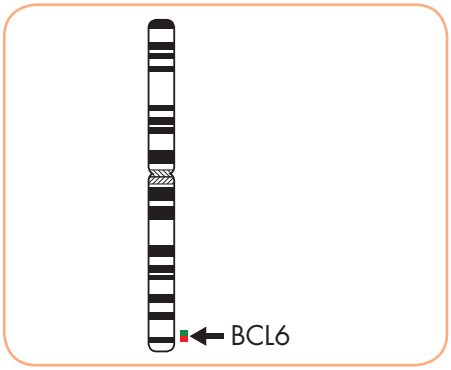
The BCL6 protein acts as a transcriptional repressor that is involved in the regulation of lymphoid development and function. Chromosomal rearrangements of the BCL6 gene region were found to occur in different types of non-Hodgkin lymphoma (NHL), including diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma (FL). The most common BCL6 translocation t(3;14)(q27;q32.3) 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 MYC rearrangements have been shown to have an extremely poor prognosis. Hence, the detection of BCL6 rearrangements by CISH may help in predicting the clinical outcome in patients with NHL.

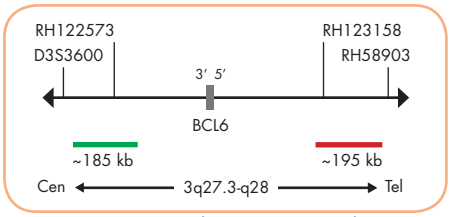
References
Akyurek N, et al. (2012) Cancer 118: 4173-83.
Cady FM, et al. (2008) J Clin Oncol 26: 4814-9.
Ohno H (2004) Histol Histopathol 19: 637-50.
Ohno H (2006) J Clin Exp Hematop 46: 43-53.

Probe Description

The ZytoDot® 2C SPEC BCL6 Break Apart Probe is a mixture of a Digoxigenin-labeled and a Dinitrophenyl-labeled probe hybridizing to the 3q27.3-q28 band. The DNP-labeled probe hybridizes distal to the BCL6 gene at 3q27.3-q28, the DIG-labeled probe hybridizes proximal to the BLC6 gene at 3q27.3.



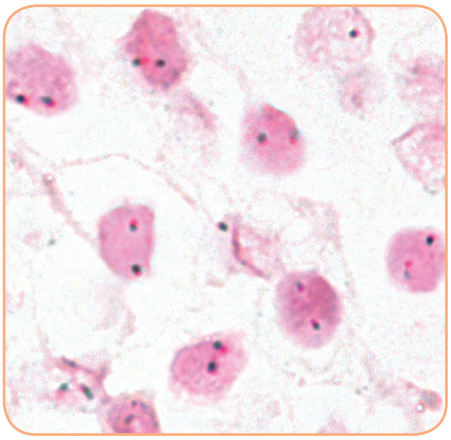
Ideogram of chromosome 3 indicating the hybridization locations.



SPEC BCL6 Probe map (not to scale).

Results

In an interphase nucleus of a normal cell lacking a translocation involving the 3q27.3-q28 band, using the ZytoDot® 2C CISH Implementation Kit, two red/green fusion signals are expected representing two normal (non-rearranged) 3q27.3-q28 loci. A signal pattern consisting of one red/green fusion signal, one red signal, and a separate green signal indicates one normal 3q27.3-q28 locus and one 3q27.3-q28 locus affected by a translocation.



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

Prod. No.	Product	Label	Tests* (Volume)
C-3074-100	ZytoDot 2C SPEC BCL6 Break Apart Probe CE IVD	Digoxigenin/DNP	10 (100 µl)
Related Products			
C-3044-10	ZytoDot 2C CISH Implementation Kit CE IVD Incl. Heat Pretreatment Solution EDTA, 150 ml; Pepsin Solution, 1ml; Wash Buffer SSC, 150 ml; 20x Wash Buffer TBS, 50 ml; Anti-DIG/DNP-Mix, 1 ml; HRP/AP-Polymer-Mix,1 ml; AP-Red Solution A, 0.1 ml; AP-Red Solution B, 4 ml; HRP-Green Solution A, 0.2 ml; HRP-Green Solution B, 4 ml; Nuclear Blue Solution, 4 ml; Mounting Solution (alcoholic), 1 ml		10

** 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.*

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219