

ZytoDot® 2C SPEC IGH Break Apart Probe

Background

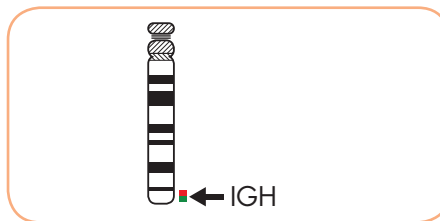
The ZytoDot® 2C SPEC IGH Break Apart Probe is designed to detect translocations involving the chromosomal region 14q32.33 harboring the IGH gene. Rearrangements involving the IGH (immunoglobulin heavy locus, a.k.a. IGH@) gene are considered to be cytogenetic hallmarks for non-Hodgkin lymphoma (NHL). NHLs represent 50% of all hematological malignancies. IGH gene rearrangements have been identified in about 50% of NHLs and are associated with specific subtypes of NHLs. Translocation t(11;14)(q13.3;q32.3) can be found in about 95% of mantle cell lymphoma (MCL), t(14;18)(q32.3;q21.3) in 80% of follicular lymphoma (FL), t(3;14)(q27;q32.3) in diffuse large B-cell lymphoma (DLBCL), and t(8;14)(q24.21;q32.3) in Burkitt's lymphoma. In all of these translocations an oncogene located near the breakpoint of the translocation partner is activated by juxtaposing to IGH regulatory sequences. Rearrangements involving 14q32.33 have unique biological characteristics and correlate with clinical, morphological, and immunophenotypic features. CISH is a helpful tool for the diagnosis, selecting treatment, and giving prognostic information.

References

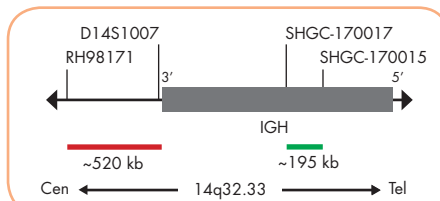
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 Kazuhiro N, et al. (1997) Blood 90: 526-34.
 Lu S, et al. (2004) Cancer Genet and Cytogenet 152: 141-5.
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Probe Description

The ZytoDot® 2C SPEC IGH Break Apart Probe is a mixture of a Digoxigenin-labeled and a Dinitrophenyl-labeled probe hybridizing to the 14q32.33 band. The DNP-labeled probe hybridizes proximal and the DIG-labeled probe hybridizes distal to the constant regions of the IGH locus at 14q32.33.



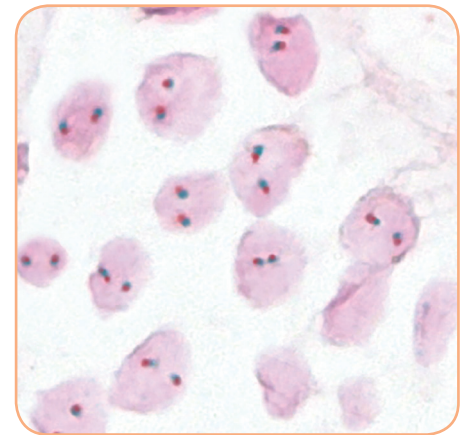
Ideogram of chromosome 14 indicating the hybridization locations.



SPEC IGH Probe map (not to scale).

Results

In an interphase nucleus of a normal cell lacking a translocation involving the 14q32.33 band, using the ZytoDot® 2C CISH Implementation Kit, two red/green fusion signals are expected representing two normal (non-rearranged) 14q32.33 loci. A signal pattern consisting of one red/green fusion signal, one red signal, and a separate green signal indicates one normal 14q32.33 locus and one 14q32.33 locus affected by a translocation.



SPEC IGH 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-3071-100	ZytoDot 2C SPEC IGH Break Apart Probe CE IVD	Digoxigenin/DNP	10 (100 µl)
C-3044-10	ZytoDot 2C CISH Implementation Kit CE IVD		10

Incl. Heat Pretreatment Solution EDTA, 150 ml; Pepsin Solution, 1 ml; 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

* 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.