

ZytoDot® 2C SPEC MDM2/CEN 12 Probe

Background

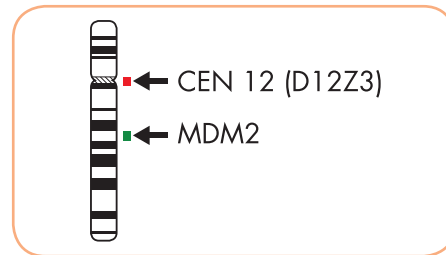
The ZytoDot® 2C SPEC MDM2/CEN 12 Probe is designed for the simultaneous detection of MDM2 and centromere 12 in formalin-fixed, paraffin-embedded tissue sections or cell samples.

The MDM2 (mouse double minute 2) gene is located in the chromosomal region 12q15 and encodes for an E3 ubiquitin ligase which acts as a major negative regulator of the tumor suppressor p53.

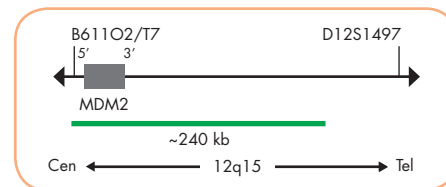
MDM2 gene amplifications are found in more than 10% of human tumors. Due to the amplification of the respective chromosomal region, MDM2 is overexpressed in many human tumors such as soft tissue sarcomas, osteosarcomas, gliomas, NSCLC, gastric and breast carcinomas. Well-differentiated liposarcomas (WDLPS), the most common soft tissue tumors in adults, are characterized by the amplification of 12q-derived chromosomal material, harboring the MDM2 oncogene while lipomas show balanced translocations involving 12q13-15. Accordingly, detection of the 12q14-15 amplification is regarded as a valuable tool for the differential diagnosis between well-differentiated liposarcomas and lipomas. Furthermore, detection of the MDM2 amplification might have prognostic relevance in gastrointestinal stromal tumors (GIST), the most common primary mesenchymal tumor of the gastrointestinal tract.

Probe Description

The ZytoDot® 2C SPEC MDM2/CEN 12 Probe is a mixture of a Digoxigenin-labeled probe specific for MDM2 gene at 12q15 and a Dinitrophenyl-labeled CEN 12 probe specific for the alpha satellite centromeric region of chromosome 12 (D12Z3).



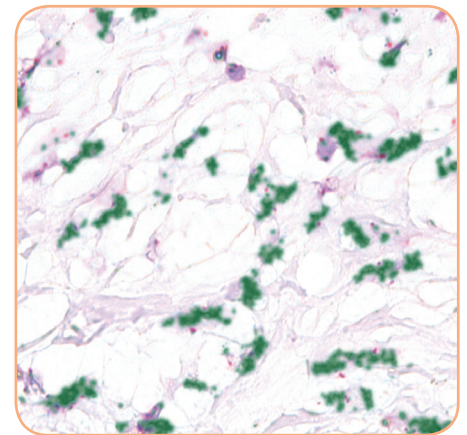
Ideogram of chromosome 12 indicating the hybridization locations.



SPEC MDM2 Probe map (not to scale).

Results

In a normal interphase nucleus, using the ZytoDot® 2C CISH Implementation Kit two red and two green signals are expected. In a cell with amplification of the MDM2 gene locus, multiple copies of the green signal or green signal clusters will be observed.



Liposarcoma tissue section with MDM2 amplification as indicated by large green clusters.

References

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Prod. No.	Product	Label	Tests* (Volume)
C-3049-100	ZytoDot 2C SPEC MDM2/CEN12 Probe CE IVD	Digoxigenin/DNP	10 (100 µl)
C-3049-400	ZytoDot 2C SPEC MDM2/CEN12 Probe CE IVD	Digoxigenin/DNP	40 (400 µl)
Related Products			
C-3044-10	ZytoDot 2C CISH Implementation Kit CE IVD 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		10
C-3044-40	ZytoDot 2C CISH Implementation Kit CE IVD Incl. Heat Pretreatment Solution EDTA, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 500 ml; 20x Wash Buffer TBS, 2x 50 ml; Anti-DIG/DNP-Mix, 4 ml; HRP/AP-Polymer-Mix, 4 ml; AP-Red Solution A, 0.4 ml; AP-Red Solution B, 15 ml; HRP-Green Solution A, 0.8 ml; HRP-Green Solution B, 15 ml; Nuclear Blue Solution, 20 ml; Mounting Solution (alcoholic), 4 ml		40

* 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.