

# ZytoLight® SPEC MDM2/CEN 12 Dual Color Probe



## Background

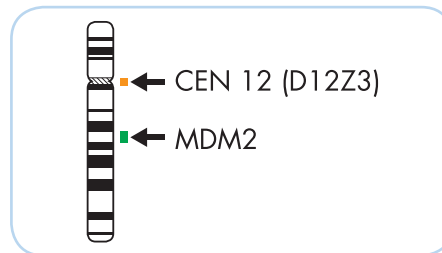
The ZytoLight® SPEC MDM2/CEN 12 Dual Color Probe is designed for the detection of MDM2 gene amplifications found in more than 10% of human tumors. The MDM2 (MDM2 proto-oncogene) gene is located in the chromosomal region 12q15 and encodes for an E3 ubiquitin ligase which acts as a major negative regulator of the tumor suppressor p53. Due to 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 WDLPS and lipomas. Furthermore, detection of MDM2 amplification might have prognostic relevance in gastrointestinal stromal tumors (GIST), the most common primary mesenchymal tumor of the gastrointestinal tract.

## References

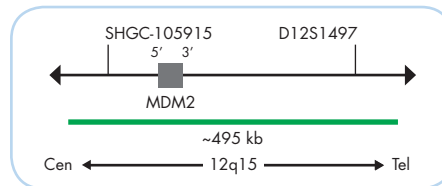
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## Probe Description

The SPEC MDM2/CEN 12 Dual Color Probe is a mixture of an orange fluorochrome direct labeled CEN 12 probe specific for the alpha satellite centromeric region of chromosome 12 (D12Z3) and a green fluorochrome direct labeled SPEC MDM2 probe specific for the MDM2 gene at 12q15.



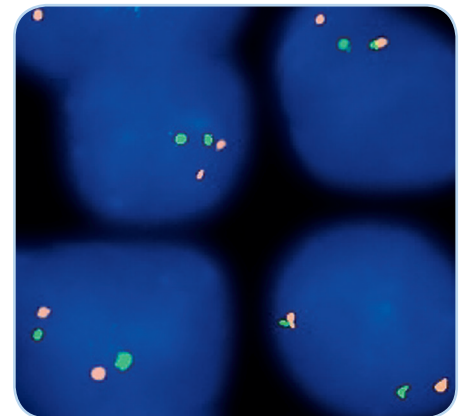
Ideogram of chromosome 12 indicating the hybridization locations.



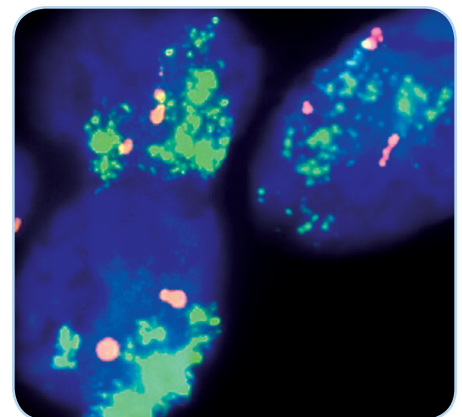
SPEC MDM2 Probe map (not to scale).

## Results

In a normal interphase nucleus, two orange 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.



Normal interphase cells, MDM2 (green), CEN 12 (orange).



Liposarcoma tissue section with amplification of the MDM2 gene (green), CEN 12 (orange).

Prod. No.	Product	Label	Tests* (Volume)
Z-2013-50	ZytoLight SPEC MDM2/CEN 12 Dual Color Probe CE IVD	●/●	5 (50 µl)
Z-2013-200	ZytoLight SPEC MDM2/CEN 12 Dual Color Probe CE IVD	●/●	20 (200 µl)
<b>Related Products</b>			
Z-2028-5	ZytoLight FISH-Tissue Implementation Kit CE IVD Inc. Heat Pretreatment Solution Citric, 150 ml; Pepsin Solution, 1 ml; Wash Buffer SSC, 210 ml; 25x Wash Buffer A, 50 ml; DAPI/DuraTect-Solution, 0.2 ml		5
Z-2028-20	ZytoLight FISH-Tissue Implementation Kit CE IVD Inc. Heat Pretreatment Solution Citric, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 560 ml; 25x Wash Buffer A, 100 ml; DAPI/DuraTect-Solution, 0.8 ml		20

\* 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.