

## ZytoDot® SPEC MDM2 Probe

### Background

The ZytoDot® SPEC MDM2 Probe is designed for the detection of MDM2 gene amplifications found in more than 10% of human tumors.

The MDM2 (murine 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. Due to the amplification of the respective chromosomal region, MDM2 is over-expressed 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.

### References

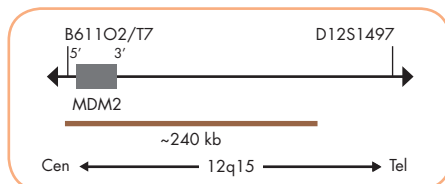
Korcheva VB, et al. (2011) Appl Immunohistochem Mol Morphol 19: 119-25.  
 Larousserie F, et al. (2013) Eur J Radiol 82: 2149-53.  
 Luan SL, et al. (2010) J Pathol 222: 166-79.  
 Momand J, et al. (1992) Cell 69: 1237-45.  
 Oliner JD, et al. (1992) Nature 358: 80-3.  
 Pedoutour F, et al. (1994) Genes Chromosomes Cancer 10: 85-94.  
 Pedoutour F, et al. (2004) Bull Cancer 91: 317-23.  
 Poaty H, et al. (2012) PLoS One 7: e29426.  
 Toledo F & Wahl GM (2006) Nat Rev Cancer 6: 909-23.  
 Tornillo L, et al. (2005) Lab Invest 85: 921-31.  
 Vassilev LT (2007) Trends Mol Med 13: 23-31.

### Probe Description

The ZytoDot® SPEC MDM2 Probe is a Digoxigenin-labeled probe specific for the MDM2 gene region at 12q15, processed by the the unique ZytoVision® Repeat Subtraction Technique resulting in advanced specificity and less background.



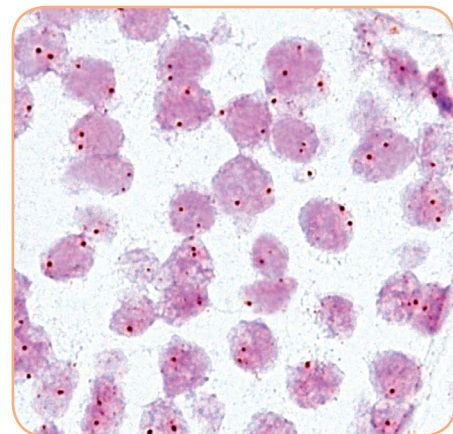
Ideogram of chromosome 12 indicating the hybridization locations.



SPEC MDM2 Probe map (not to scale).

### Results

In normal cells, two distinct dot-shaped signals per nucleus will be observed. Nuclei with amplification of the MDM2 gene locus or polysomy of chromosome 12 will show multiple dots or large signal clusters.



Normal nuclei each with two MDM2 signals.

Prod. No.	Product	Label	Tests* (Volume)
C-3012-400	ZytoDot SPEC MDM2 Probe <b>CE</b> <b>IVD</b>	Digoxigenin	40 (400 µl)

### Related Products

C-3018-40	ZytoDot CISH Implementation Kit <b>CE</b> <b>IVD</b>		40
-----------	--	--	----

Incl. Heat Pretreatment Solution EDTA, 500 ml; Pepsin Solution, 4 ml; Wash Buffer SSC, 500 ml; PBS/Tween, good for 2000 ml; Blocking Solution, 4 ml; Mouse-anti-DIG, 4 ml; Anti-Mouse-HRP-Polymer, 4 ml; DAB Solution A, 0.3 ml; DAB Solution B, 10 ml; Mayer's Hematoxylin Solution, 20 ml; Mounting Solution (alcoholic), 4 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.