

## ZytoDot® 2C SPEC MET/CEN 7 Probe



### Background

The ZytoDot® 2C SPEC MET/CEN 7 Probe is designed for the detection of MET gene amplifications found in a variety of human tumors.

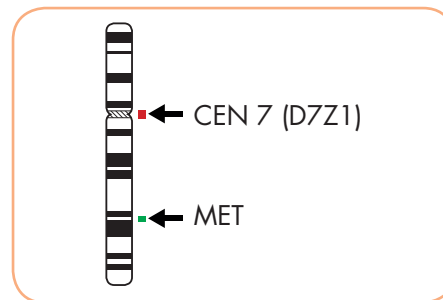
The MET gene (a. k. a. c-Met) is located in the chromosomal region 7q31.2 and encodes a transmembrane tyrosine kinase receptor for the hepatocyte growth factor (HGF). HGF and MET play an important role in angiogenesis and tumor growth. Activation or upregulation of MET was found in a number of carcinomas including lung, breast, colorectal, prostate, and gastric carcinomas as well as in gliomas, melanomas and some sarcomas. MET overexpression is known as a negative prognostic indicator in patients with various carcinomas, multiple myeloma, or glioma. Therefore, several inhibitors of the HGF/MET signaling pathway are being studied and developed as potent therapies to inhibit angiogenesis and tumor growth. Recently, it was shown that MET amplification leads to resistance to gefitinib or erlotinib in lung cancer by driving ERBB3-dependent activation of the PI3K pathway.

### References

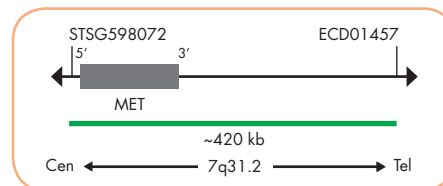
Cooper CS, et al. (1984) Nature 311: 29-32.  
Engelman JA, et al. (2007) Science 316: 1039-43.  
Garcia S, et al. (2007) Int J Oncol 31: 49-58.  
Hara T, et al. (1998) Lab Invest 78: 1143-53.

### Probe Description

The ZytoDot® 2C SPEC MET/CEN 7 Probe is a mixture of a Dinitrophenyl-labeled CEN 7 probe specific for the alpha satellite centromeric region of chromosome 7 (D7Z1) and a Digoxigenin-labeled probe specific for the chromosomal region 7q31.2 harboring the MET gene.



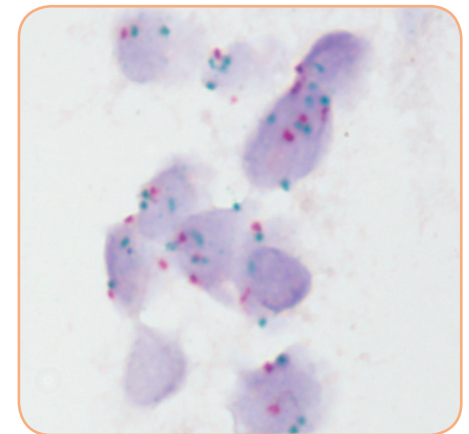
Ideogram of chromosome 7 indicating the hybridization locations.



SPEC MET Probe map (not to scale).

### Results

In a normal interphase nucleus, using the ZytoDot® 2C CISH Implementation Kit two red (CEN 7) and two green (MET) signals are expected. In a cell with amplification of the MET gene locus, multiple copies of the green signal or green signal clusters will be observed.



Lung cancer tissue section with multiple copies of chromosome 7 (red) and extra MET signals (green) in the nuclei.

Prod. No.	Product	Label	Tests* (Volume)
C-3057-400	ZytoDot 2C SPEC MET/CEN 7 Probe CE IVD	Digoxigenin/DNP	40 (400 µl)
<b>Related Products</b>			
C-3044-40	ZytoDot 2C CISH Implementation Kit CE IVD		40
Incl. Heat Pretreatment Solution EDTA, 500 ml; Pepsin Solution, 4ml; 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			

\* 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.