

# ZytoMation® MET/CEN 7 Dual Color FISH Probe



## Background

The ZytoMation® MET/CEN 7 Dual Color FISH Probe is designed for the detection of MET gene amplifications found in a variety of human tumors.

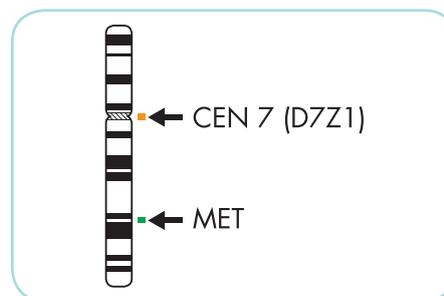
The MET gene (a.k.a. c-Met) is located in the chromosomal region 7q31.2 and encodes a transmembrane tyrosine kinase receptor for the hepatocyte growth factor (HGF). HGF and MET play an important role in angiogenesis and tumor growth. Activation or upregulation of MET was found in a number of carcinomas 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. In addition, 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

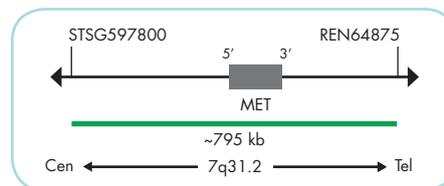
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## Probe Description

- The ZytoMation® MET/CEN 7 Dual Color FISH Probe is composed of:
  - ZyGreen (excitation 503 nm/emission 528 nm) labeled polynucleotides (~5 ng/μl), which target sequences mapping in 7q31.2\*\* (chr7:115,925,700-116,718,699) harboring the MET gene region.
  - ZyOrange (excitation 547 nm/emission 572 nm) labeled polynucleotides (~0.2 ng/μl), which target sequences mapping in 7p11.1-q11.1 specific for the alpha satellite centromeric region D7Z1 of chromosome 7.
  - Formamide based hybridization buffer



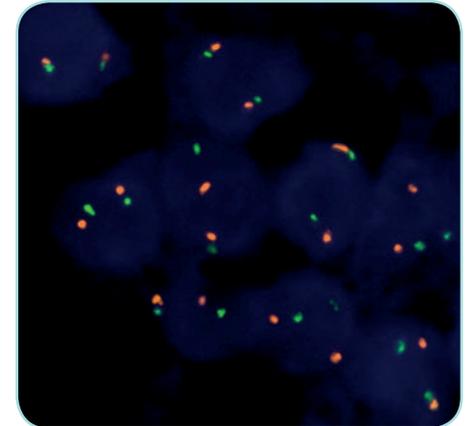
Ideogram of chromosome 7 indicating the hybridization locations.



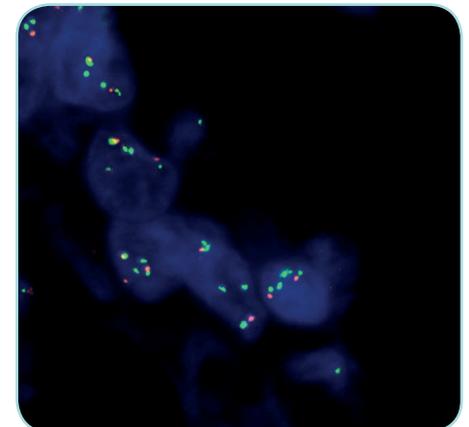
MET Probe map (not to scale).

## Results

In a normal interphase nucleus, two orange and two green signals are expected. In a cell with amplification of the MET gene locus, multiple copies of the green signal or green signal clusters will be observed.



MET/CEN 7 Dual Color FISH Probe hybridized to normal interphase cells as indicated by two green and two orange signals in each nucleus.



Lung adenocarcinoma tissue section with amplification of the MET gene locus as indicated by multiple copies of the green signal in each nucleus.

Prod. No. Product

Z-2321-5.1ML ZytoMation MET/CEN 7 Dual Color FISH Probe CE IVD

Label Tests\* (Volume)

●/● up to 20 (5.1 ml)

\* Using 240 μl probe solution per test. IVD labeled products are only available in certain countries. All other countries research use only! Please contact your local dealer for more information.

\*\*According to Human Genome Assembly GRCh37/hg19