

## ZytoDot® 2C SPEC EGFR/CEN 7 Probe



### Background

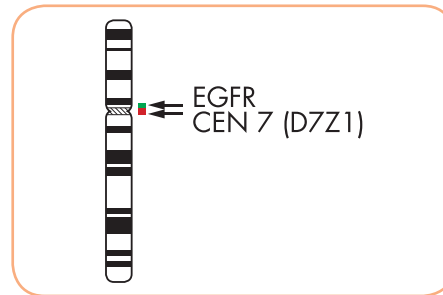
The ZytoDot® 2C SPEC EGFR/CEN 7 Probe is designed for the simultaneous detection of EGFR and centromere 7 in formalin-fixed, paraffin-embedded tissue sections and cell samples. The EGFR gene (a.k.a. ERBB1 and HER1) is located in the chromosomal region 7p11.2 and encodes a transmembrane glycoprotein acting as a cellular growth factor receptor. Overexpression of EGFR has been shown in a number of tumor entities and is associated with poor prognosis. EGFR copy number identified by *in situ* Hybridization is thought to be a molecular predictor in neoplasms.

#### References

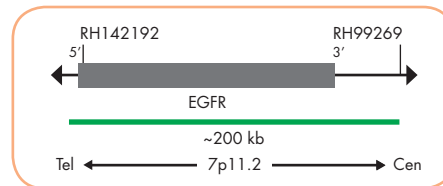
Balla P, et al. (2011) *Histopathology* 59: 376-89.  
 Brunner K, et al. (2010) *Anal Quant Cytol Histol* 32: 78-89.  
 Ethl T, et al. (2012) *Hum Pathol* 43: 921-31.  
 Isola J & Tanner M (2004) *Methods Mol Med* 97: 133-44.  
 Kondo I & Shimizu N (1983) *Cytogenet Cell Genet* 35: 9-14.  
 Marquez A, et al. (2004) *Diagn Mol Pathol* 13: 1-8.  
 Tsukamoto T, et al. (1991) *Int J Dev Biol* 35: 25-32.  
 Zaczek A, et al. (2005) *Histol Histopathol* 20: 1005-15.

### Probe Description

The ZytoDot® 2C SPEC EGFR/CEN 7 Probe is a mixture of a Digoxigenin-labeled probe specific for the EGFR gene at 7p11.2 and a Dinitrophenyl-labeled CEN 7 probe specific for the alpha satellite centromeric region of chromosome 7 (D7Z1).



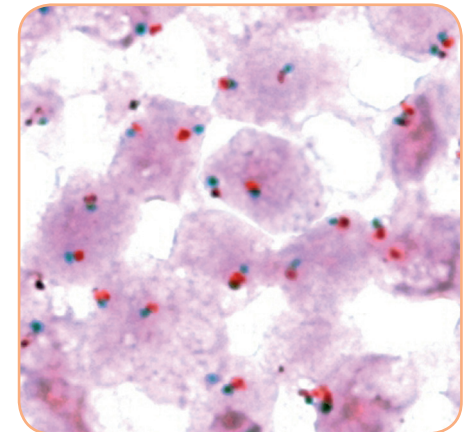
Ideogram of chromosome 7 indicating the hybridization locations.



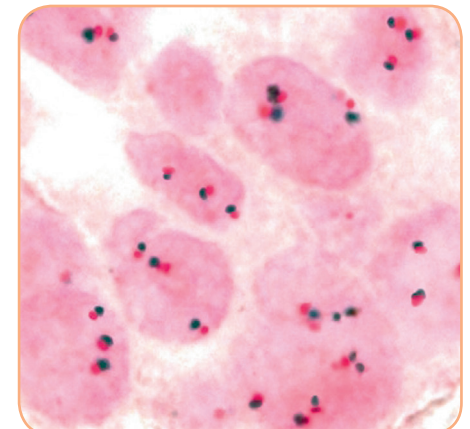
SPEC EGFR Probe map (not to scale).

### Results

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



Normal nuclei each with two EGFR (green) and two centromere 7 (red) signals.



Trisomy of chromosome 7 as indicated by three EGFR (green) and three CEN 7 (red) signals in each nucleus.

Prod. No.	Product	Label	Tests* (Volume)
C-3033-100	ZytoDot 2C SPEC EGFR/CEN 7 Probe CE IVD	Digoxigenin/DNP	10 (100 µl)
C-3033-400	ZytoDot 2C SPEC EGFR/CEN 7 Probe CE IVD	Digoxigenin/DNP	40 (400 µl)
<b>Related Products</b>			
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.