

ZytoDot® SPEC MYCN Probe

Previously: ZytoDot SPEC NMYC Probe

Background

The ZytoDot® SPEC MYCN Probe is designed for the detection of MYCN amplification which represents the most powerful unfavorable prognostic factor for neuroblastoma. Less frequently amplifications are found in retinoblastoma, small cell lung cancer, astrocytoma and other tumors derived from the neuroectoderm.

The MYCN (v-myc avian myelocytomatosis viral related oncogene, neuroblastoma derived, a.k.a. NMYC) gene is located in the chromosomal region 2p24.3 and encodes a 62-64 kDa transcription factor normally expressed in the developing nervous system and other selected tissues. The MYCN oncogene is amplified in about 25% of primary neuroblastomas and 90% of tumor-derived cell lines.

Additional copies are rarely located at the normal locus but are detected as double minute chromosomes or homogeneously staining regions.

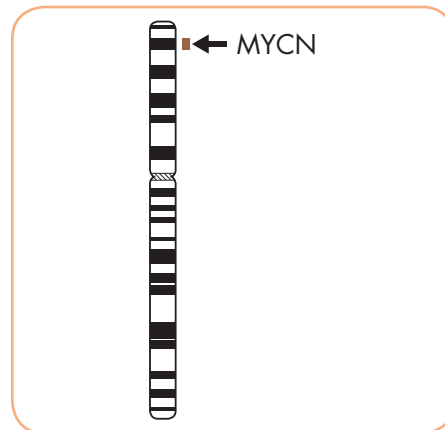
Amplification of the MYCN gene is strongly associated with rapid tumor progression, advanced stages of the disease, and poor prognosis. Hence, amplification status is increasingly being used for stratification of patients to different treatment protocols.

References

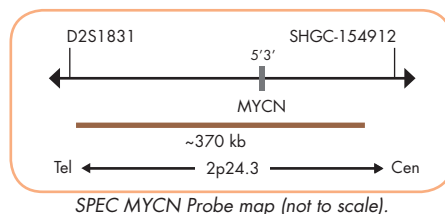
Kaneko M, et al. (1998) *Med Pediatr Oncol* 31: 1-7.
 Lee WH, et al. (1984) *Nature* 309: 458-60.
 Maris JM, et al. (2007) *Lancet* 369: 2106-20.
 Slamon DJ, et al. (1986) *Science* 232: 768-72.
 Suita S, et al. (2007) *J Pediatr Surg* 42: 489-93.
 Thorner PS, et al. (2006) *Am J Surg Pathol* 30: 635-42.

Probe Description

The ZytoDot® SPEC MYCN Probe is a Digoxigenin-labeled probe specific for the MYCN gene at 2p24.3, processed by the unique ZytoVision® Repeat Subtraction Technique resulting in advanced specificity and less background.



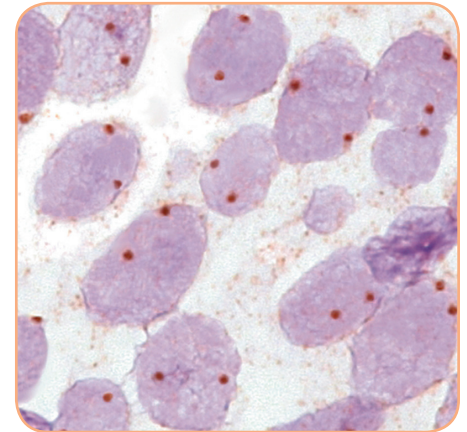
Ideogram of chromosome 2 indicating the hybridization locations.



SPEC MYCN Probe map (not to scale).

Results

In normal cells, two distinct dot-shaped signals per nucleus will be observed. Nuclei with amplification of the MYCN gene locus or aneuploidy of chromosome 2 will show multiple dots or large signal clusters.



Normal nuclei each with two MYCN signals.

Prod. No.	Product	Label	Tests* (Volume)
C-3029-400	ZytoDot SPEC MYCN Probe CE IVD	Digoxigenin	40 (400 µl)

Related Products

C-3018-40	ZytoDot CISH Implementation Kit CE IVD		40
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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.