

Poseidon™ Repeat Free™ MYCN (2p24) & LAF (2q11) Control probe

Introduction: Amplification of MYCN occurs in about 25% of neuroblastoma primary tumors and is a reliable marker of aggressive clinical behavior. The Amplification of the MYCN gene is frequently seen either in extrachromosomal double minutes or in homogeneously staining regions in chromosomes of aggressively growing neuroblastomas. N-MYC has an important part in the history of molecular biology. In clinical oncology this was the first example of using molecular genetic data prospectively to stratify patients to therapy.

Intended use: The **MYCN (2p24)** specific DNA Probe is optimized to detect copy numbers of the MYCN gene region at region 2p24. The **LAF** gene region probe at 2q11 is included to facilitate chromosome identification.

The probe is recommended to be used in combination with a Poseidon FISH Kit providing necessary reagents to perform FISH (KBI-60002, KBI-60003 or KBI-60001) for optimal results.

Critical region 1 (red): The **MYCN (2p24)** specific DNA probe is direct-labeled with PlatinumBright550.

Control region 2 (green): The **LAF (2q11)** control DNA probe is direct-labeled with PlatinumBright495.

Reagent: Poseidon probes are direct-labeled DNA probes provided in a ready-to-use format. Apply 10 µl of probe to a sample area of approximately 22 x 22 mm.

Please refer to the Instructions for Use for the entire Poseidon FISH protocol.

Poseidon Repeat Free probes do not contain Cot-1 DNA. Hybridization efficiency is therefore increased and background, due to unspecific binding, is highly reduced.

Interpretation: The **MYCN (2p24)** probe is designed as a dual-color assay to detect amplification at 2p24. Amplification involving the MYCN gene region at 2p24 will show several red signals, while the control at the LAF (2q11) region will provide 2 signals. The International Neuroblastoma Risk Group has recommended that a ratio of MYCN: control signal of greater than 4:1 is considered as bad prognosis for neuroblastoma. Signals often appear as homogeneously staining region or double minutes containing numerous MYCN signals. Two single color red (R) and green (G) signals will identify the normal chromosomes 2 (2R2G).

	Normal Signal Pattern	Amp(2p24)
Expected Signals	2R2G	> 5R2G

References: Squire J et al, 1996, Mol.Diagn., 1; 281-289
Ambros P et al, 2001, Med Pediatr Oncol., 36; 1-4
INRG, preliminary report, ANC 2006



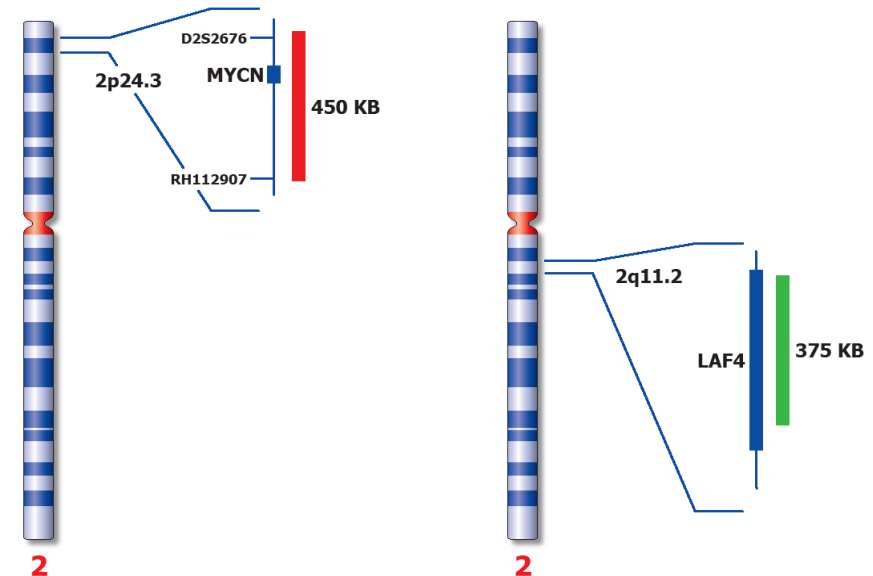
Application Manual

KBI-10706
ON MYCN (2p24) / LAF (2q11)



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Not to scale