

Poseidon™ Repeat Free™ PDGFRB (5q33) Break probe

Introduction: Translocations that disrupt and constitutively activate the platelet-derived growth factor receptor β (PDGFRB) gene at chromosome band 5q33 have been described in patients with BCR-ABL-negative chronic myeloproliferative disorders (CMPD) and myelodysplastic / myelo-proliferative diseases (MDS/MPD).

Intended use: The PDGFRB probe is optimized to detect translocations involving the PDGFRB region at 5q33 in a dual-color, split assay on metaphase/interphase spreads, blood smears and bone marrow cells.

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 proximal PDGFRB gene region is direct-labeled with PlatinumBright550.

Critical region 2 (green): The distal PDGFRB gene region is direct-labeled with PlatinumBright495.

Reagent: Poseidon probes are direct-labeled DNA probes provided in a ready-to-use format. Apply 10 μ l 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 PDGFRB Break probe is designed as a dual-color split probe to detect translocations at 5q33. A break is defined when a red/green or yellow fusion signals (F) splits into separate red and green signals. Only red and green signals which are more than one signal diameter apart from each other are counted as a break. Co-localized red/green or yellow signals identify the normal chromosome(s) 5.

Signal patterns other than those described above may indicate variant translocations or other complex rearrangements. Investigators are advised to analyze metaphase cells for the interpretation of atypical signal patterns.

	Normal Signal Pattern	5q33 Split
Expected Signals	2F	1F1R1G

References: Baxter, EJ et al, 2003, Brit J Haem., 120; 251
Pardanani A, Tefferi A., 2004, Blood, 104; 1931-1939



Application Manual

KBI-10004
ON PDGFRB (5q33) Break



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