

Poseidon™ Repeat Free™ EVI t(3;3), inv(3) Break probe

Introduction: The pericentric inversion of chromosome 3 and the t(3;3)(q21;q26) are two recurrent aberrations in bone marrow of patients with malignant myeloid diseases (MDS and AML). The inversion creates a novel fusion gene, which appears to be critical for leukemic transformation.

Intended use: The EVI t(3;3) inv(3) Break Probe is optimized to detect the inversion of chromosome 3 involving the EVI gene region at 3q26 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 distal EVI gene region probe is direct-labeled with PlatinumBright550.

Critical region 2 (green): The proximal EVI gene region 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 EVI Break probe is designed as a dual-color split probe to detect inversion or translocations at the EVI gene region at 3q26. 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) 3.

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.

Limitations due to most recent observations the t(3,3)(q21q26) may not be detectable in all cases due to more distally located breakpoints as covered by this probe. The inv(3) has been detected using this probe in all investigated cases so far.

	Normal Signal Pattern	t(3;3), inv(3)
Expected Signals	2F	1F1R1G

References:
 Levy E. et al, 1994, Blood, 83; 1348-1354
 Wieser R et al, 2003, Haematologica, 88; 25-30
 De Melo V. et al, 2007, Leukemia aop, 13 sep, 1-4

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Application Manual

KBI-10204
 ON EVI t(3;3); inv(3) Break



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