

Poseidon™ Repeat Free™ FIP1L1 – CHIC2 – PDGFRA (4q12) Deletion, Break probe

Introduction: The deletion of the CHIC2 locus generates a fusion FIP1L1-PDGFRA gene giving rise to a novel tyrosine kinase. This deletion has been observed in patients with idiopathic hypereosinophilic syndrome (HES), chronic eosinophilic leukemia (CEL), systemic mast cell disease, and chronic myeloproliferative disorders (CMPD).

Intended use: The FIP1L1-Chic2-PDGFRA probe is optimized to detect the Chic2 deletion at 4q12 associated with the FIP1L1/PDGFRA fusion in a dual-color, dual-fusion assay on metaphase/interphase spreads, blood smears and bone marrow cells. It also detects translocation involving the FIP1L1 and PDGFRA region.

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 CHIC2 (4q12) gene region is direct-labeled with PlatinumBright550.

Critical region 2 (green): The FIP1L1 and PDGFRA (4q12) gene regions are 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 FIP1L1-Chic2-PDGFRA probe is designed as deletion probe, where loss of CHIC2 region is observed as loss of a red signal leaving a green signal at 4q12. Split of the probe in case of a translocation at 4q12 results in a break of one fusion signal, observed as a 2F1G signal pattern. Single color fusion (F) signals will identify the normal chromosomes 4.

Signal patterns other than those described above may indicate variant translocations or other complex rearrangements, such as hyperdiploidy for chromosome 4. Investigators are advised to analyze metaphase cells or use additional probes (e.g. SE Chromosome 4) for the interpretation of atypical signal patterns.

	Normal Signal Pattern	Del(4q12)	Translocation at 4q12	Translocation + Deletion at 4q12*
Expected Signals	2F	1F1G	2F1G	1F2G

* hyperdiploidy for Chromosome 4 has to be verified for this signal constellation

References: Cools et al, N Engl J Med, 2003, 348, 1201-1214.
Godlib et al, Blood, 2004, 103, 2879-2891.

AM-KBI-10003_R1.1.doc

Poseidon is a Trademark of Kreatech, Repeat Free is a trademark of Immunicon



Application Manual

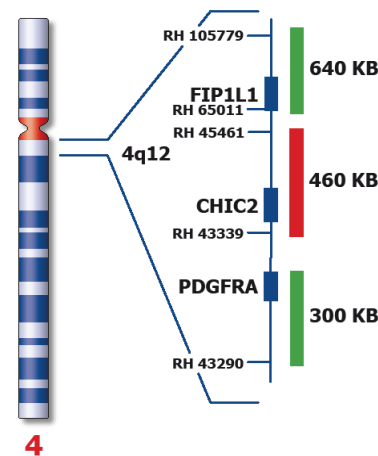
KBI-10003

ON FIP1L1-CHIC2-PDGFRA (4q12) Del, Break



Published Dec 2007

www.poseidondiagnosics.com



Application manual

Not to scale