Cat Nr/REF: KBI-10007

English

For professional use only

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

Introduction: The deletion of the CHIC2 locus generates a fusion FIP1L1-PDGFRA gene giving raise to a novel tyrosine kinase. This deletion has been observed in patients with idiophatic hypereosinophilic syndrome (HES), chronic eosinophilic leukemia (CEL), systemic mast cell disease, and chronic myeloproiferative disorders (CMPD). Additional translocations (t(4;22) or t(4;12)) involving PDGFRA have recently been reported.

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-colour, dual-fusion assay on metaphase/interphase spreads, blood smears and bone marrow cells. It also detects translocation involving the 4q12 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 are direct-labeled with Platinum*Bright*550.

Critical region 2 (blue): The **FIP1L1 (4q12)** gene region is direct-labeled with Platinum*Bright*415.

Critical region 3 (green): The **PDGFRA (4q12)** gene regions are direct-labeled in green with Platinum*Bright*495.

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/blue signal at 4q12. In case of a translocation involving 4q12 a separated green signal while a red/blue signal will be identify the der(4) chromosome.

Single color fusion (F, blue/red/green) signals will identify the normal chromosomes 4.

Signal patterns other than those described above may indicate variant translocations or other complex rearrangements, such as hyperdipoloidy 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
Expected signals	2F	1F1GB	1F1RB1G

References:

Cools et al, N Engl J Med, 2003, 348, 1201-1214.
Godlib et al, Blood, 2004, 103, 2879-2891.
Curtis C et al, Brit.J.of Haem., 2007, 138; 77-81

POSEIDON™
REPEAT-FREE™ FISH PROBES

Application Manual

KBI-10007
ON FIP1L1-CHIC2-PDGFRA (4q12) Del, Break, TC

IVD
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CE

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2°C 8°C long term storage

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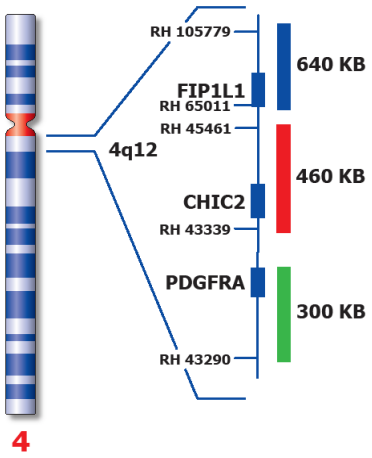

Not to scale

Application manual