Kreatech™ FISH probes

Product Information Sheet

KBI-10311

NUP98 (11p15) Break

IVD

DANGER

FORMAMIDE

2°C 8°C

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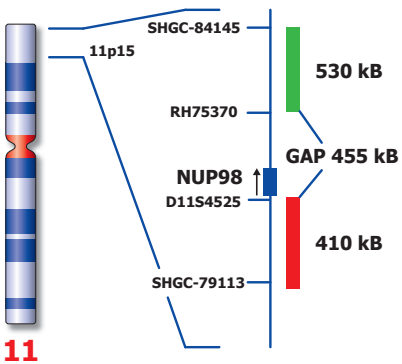

Not to scale

KBI-10311

Kreatech™ NUP98 (11p15) Break FISH probe

Introduction:

Nucleoporin 98kDa gene (NUP98) rearrangements have been identified in a wide range of hematologic malignancies, including acute myeloid leukemia (AML), acute lymphoblastic leukemia (ALL), chronic myeloid leukemia in blast crisis (CML-bc), myelodysplastic syndrome (MDS) and bilineage/ biphenotypic leukemia. The NUP98 gene is highly promiscuous with regard to its recombination spectrum, as at least 28 different partner genes have been identified for NUP98 rearrangements, all forming in-frame fusion genes. Patients with NUP98 gene rearrangements have an aggressive clinical course and the outcome of treatment is disappointing.

Intended use:

The **NUP98 (11p15) Break** FISH probe is optimized to detect translocations involving the NUP98 gene region at 11p15 in a dual-color assay on metaphase/interphase spreads, blood smears and bone marrow cells.

The probe is recommended to be used in combination with one of the Kreatech Pretreatment kits providing necessary reagents to perform FISH on various sample types for optimal results. (see also www.LeicaBiosystems.com and look for Kits & reagents)

Critical region 1 (red): The **proximal NUP98** gene region probe is direct-labeled with Platinum*Bright*™550.
Critical region 2 (green): The **distal NUP98** gene region probe is direct-labeled with Platinum*Bright*™495.

Reagent:

Kreatech 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 Kreatech FISH protocol.

Kreatech FISH probes are REPEAT-FREE™ and therefore do not contain Cot-1 DNA. Hybridization efficiency is increased and background, due to unspecific binding, is highly reduced.

Interpretation:

The **NUP98 (11p15) Break** FISH probe is designed as a dual-color split probe to detect inversions or translocations at 11p15. A break is defined as a red/green or yellow fusion signals (F) splitting into separate red and green signals. Only red (R) and green (G) signals which are more than one signal diameter apart from each other are counted as a break. Two co-localized red/green or yellow signals (2F) identify the normal chromosome(s) 11.

Note**:** Normally, a signal is counted as a split/break when the red and green signals are more than one signal diameter apart. However, for the NUP98 break probe, split signals have occasionally been observed on normal, negative slides of lesser quality. Therefore, it is recommended to carefully define cut-off specifications in your setting.
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	11p15 split
Expected Signals	2F	1F1R1G

References:

Gough et al, 2011, Blood 118; 6247-6257
Nebral et al, 2005, Haematologica 90; 746-752
Romana et al, 2006, Leukemia 20; 696-706

Warning and precautions: In case of emergencies check SDS sheets for medical advice. SDS sheets may be obtained by either contacting Leica Technical Support or visiting www.LeicaBiosystems.com. DNA probes contain formamide which is a teratogen; do not inhale or allow skin contact. Wear gloves and a lab coat when handling DNA probes. All materials should be disposed of according to your institution's guidelines for hospital waste disposal.

Reagent Storage and Handling:

Store at 2-8 °C. Reagents should not be used after the expiration date on the vial label.

TECHNICAL SUPPORT

Technical support is available at www.LeicaBiosystems.com or +31 20 6919181
or via e-mail: kreatech-support@leicabiosystems.com.

CUSTOMER SERVICE

Kreatech probes may be ordered through Leica Customer Service +31 20 6919181 or order via e-mail: purchase.orders@leica-microsystems.com.