

# Kreatech™ FISH probes

## Product Information Sheet

KBI-10306

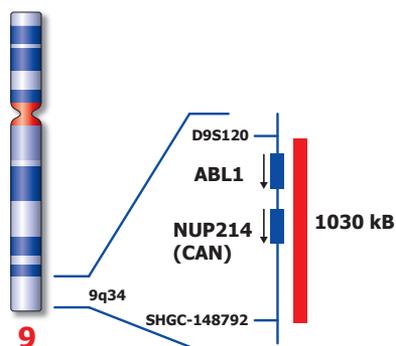
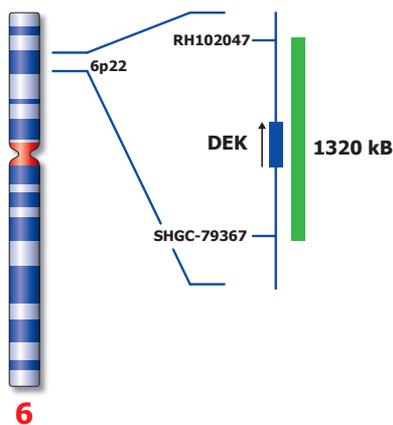
DEK/NUP214 t(6;9) Fusion



**Kreatech Biotechnology B.V.**  
Vierweg 20  
1032 LG Amsterdam  
The Netherlands  
[www.LeicaBiosystems.com](http://www.LeicaBiosystems.com)

PI-KBI-10306\_D1.2

Published July 2016



Not to scale

## Kreatech™ DEK / NUP214 t(6;9) Fusion FISH probe

**Introduction:** The chromosomal translocation t(6;9)(p22;q34) is associated with a specific subtype of acute myeloid leukemia (AML) and constitutes 0.5% to 4% of all AML cases. The translocation results in a fusion between the DEK oncogene (6p22) and the nucleoporin 214 kDa (NUP214 at 9q34; previously known as CAN). The exact mechanism by which the fusion protein DEK-NUP214 contributes to leukemia development has not been identified. Patients with t(6;9) AML have a very poor prognosis. The currently available chemotherapy does not seem to improve overall survival. However, accurate diagnosis is crucial because these patients may benefit from an early allogeneic stem cell transplant.

**Intended use:** The **DEK / NUP214 t(6;9)** specific FISH probe has been optimized to detect the reciprocal translocation t(6;9) in a dual-color, dual-fusion 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](http://www.LeicaBiosystems.com) and look for Kits & reagents)

**Critical region 1 (red):** The **NUP214 (9q34)** specific FISH probe is direct-labeled with PlatinumBright™550.  
**Critical region 2 (green):** The **DEK (6p22)** specific FISH probe is direct-labeled with PlatinumBright™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 **DEK / NUP214 t(6;9) Fusion** FISH probe is designed as a dual-fusion probe to detect both rearranged chromosomes der(6) and der(9) by two co-localized red/green or yellow fusion signals (F). Single color green and red signals will identify the normal chromosomes 6 and 9 respectively (2R2G).

Signal patterns other than those described above may indicate variant translocations, deletions on der(6) or der(9) or other complex rearrangements. Investigators are advised to analyze metaphase cells for the interpretation of atypical signal patterns.

	Normal Signal Pattern	t(6;9)
Expected Signals	2R2G	2F1R1G

**References:** Von Lindern et al, 1992, Mol. Cell. Biol.,12; 1687-1697  
 Ageberg et al, 2008, Gen. Chrom. Canc., 47; 276-287  
 Chi et al, 2008, Arch. Pathol. Lab. Med.,132; 1835-1837

**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](http://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](http://www.LeicaBiosystems.com) or +31 20 6919181 or via e-mail: [kreatech-support@leicabiosystems.com](mailto: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](mailto:purchase.orders@leica-microsystems.com).