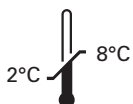


Kreatech™ FISH probes

Product Information Sheet

KBI-40108

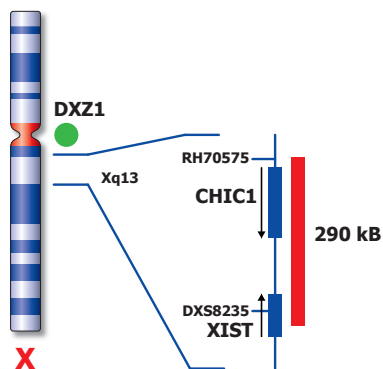
X-Inactivation XIST (Xq13) / SE X



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PI-KBI-40108_D1.1

Published March 2015



Not to scale

Kreatech™ X-Inactivation XIST (Xq13) / SE X FISH probe

Introduction: X chromosome inactivation is that aspect of mammalian dosage compensation that brings about equivalence of X-linked gene expression between females and males by inactivating one of the two X chromosomes (Xi) in normal female cells, leaving them with a single active X (Xa) as in male cells. Patients with very small r(X) chromosomes that do not include the X-inactivation locus (XIST) have been described with a more severe phenotype in certain syndromes e.g. Turner Syndrome.

Intended use: The **X-Inactivation XIST** specific FISH probe is optimized to detect copy numbers of the XIST (DXS1089, swd66) gene region at Xq13. The **Satellite Enumeration (SE) X FISH** probe is added to facilitate chromosome identification.

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 **X-Inactivation XIST** specific FISH probe is direct-labeled with PlatinumBright™550.
Control region 2 (green): The **SE X 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 **XIST (Xq13) / SE X FISH** probe is designed as a dual-color assay to detect deletions at Xq13. Deletions involving the XIST region will show one red signal and two green signals at the chromosome X centromere control region (1R2G) in females. Two single color red and green signals will identify the normal chromosomes X (2R2G).

| | Normal Signal Pattern | Del(Xq13) |
|-------------------------|-----------------------|---------------|
| Expected Signals Female | 2R2G | 1R2G |
| Expected Signals Male | 1R1G | Not Expected* |

*however, in 47,XXY 1R2G is possible

References: Le Caignec et al, 2003, Prenatal Diagnosis; 23(2); 143-145

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.