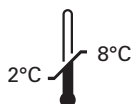


Kreatech™ FISH probes

Product Information Sheet

KBI-45112

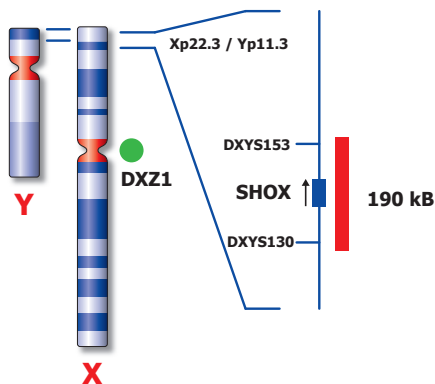
Short Stature SHOX (Xp22) / SE X



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Not to scale

Kreatech™ Short Stature SHOX (Xp22) / SE X FISH probe

Introduction: The pseudoautosomal region (PAR1) contains an interval of 170 kb that tends to be deleted in individuals with short stature and different rearrangements on Xp22 or Yp11.3. SHOX (short stature homeobox-containing gene, previously known as PHOG, GCFX, SS) a homeobox-containing gene located in the PAR1 is involved in idiopathic growth retardation and in the short stature phenotype of Turner syndrome patients. The absence of the SHOX gene may be responsible for the growth failure in Turner syndrome females.

Intended use: The **Short Stature SHOX** region probe is optimized to detect copy numbers of the SHOX gene region at Xp22/Yp11. The **Satellite Enumeration (SE) X** FISH probe is included as a control probe.

Critical region 1 (red): The **Short Stature SHOX** specific FISH probe is direct-labeled with PlatinumBright™550.
Control region 2 (green): The **SE X** control FISH probe is direct-labeled with PlatinumBright™495.

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)

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 **Short Stature SHOX (Xp22) / SE X** FISH probe is designed as a dual-color assay to detect deletions at Xp22/Yp11. Deletions involving the SHOX gene region will show one red signal and two green signals at the chromosome X centromere control region (1R2G) in females and (1R1G) in males. The normal signal pattern is 2R2G in females and 2R1G in males.

	Normal Signal Pattern	Del(Xp22)
Expected Signals Female	2R2G	1R2G
Expected Signals Male	2R1G	1R1G

References: Rao E et al, 1997, Nat Genet., 16: 54-63
 Palka G et al, 2000, Clin Genet, 57: 449-453

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 formaldehyde 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.