Kreatech™ FISH probes

Product Information Sheet

KBI-20032

SE X (DXZ1) / SE Y (DYZ3) / SE 18 (D18Z1)

IVD

DANGER

FORMAMIDE

2°C 8°C

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PI-KBI-20032_D1.1

Published March 2015

Not to scale

KBI-20032

Kreatech™ SE X (DXZ1) / SE Y (DYZ3) / SE 18 (D18Z1) FISH probe

Introduction:

Trisomy 18 causing Edwards syndrome is the second most common autosomal trisomy after trisomy 21. The disorder/condition is characterized by severe psychomotor and growth retardation, microcephaly, microphthalmia, malformed ears, micrognathia or retrognathia, microstomia, distinctively clenched fingers, and other congenital malformations.
Chromosomal abnormalities involving the X and Y chromosome (sex chromosomes) are slightly less common than autosomal abnormalities and are usually much less severe in their effects. The high frequency of people with sex chromosome aberrations is partly due to the fact that they are rarely lethal conditions.
Turner syndrome occurs when females inherit only one X chromosome; their genotype is X0.
Metafemales or triple-X females, inherit three X chromosomes; their genotype is XXX or more rarely XXXX or XXXXX.
Klinefelter syndrome males inherit one or more extra X chromosomes; their genotype is XXY or more rarely XXXY, XXXXY, or XY/XXY mosaic**.**
XYY syndrome males inherit an extra Y chromosome; their genotype is XYY.

Intended use:

The **chromosome X specific** Satellite probe (DXZ1) is optimized to detect copy numbers of Chromosome X at Xp11-Xq11 on uncultured amniotic cells.
The **chromosome Y specific** Satellite probe (DYZ3) is optimized to detect copy numbers of Chromosome Y at Yp11-Yq11 on uncultured amniotic cells.
The **chromosome 18 specific** Satellite probe (D18Z1) is optimized to detect copy numbers of Chromosome 18 at 18p11-18q11 on uncultured amniotic cells.

Critical region 1 (green): The **SE X** DNA probe is direct-labeled with Platinum*Bright*™495.
Critical region 2 (red): The **SE Y** DNA probe is direct-labeled with Platinum*Bright*™550.
Critical region 3 (blue): The **SE 18** DNA probe is direct-labeled with Platinum*Bright*™415.

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 **SE X (DXZ1) / SE Y (DYZ3) / SE 18 (D18Z1)** FISH probe is designed as a triple-color assay to detect gains or losses of chromosome X, Y and/or 18. Turner syndrome will be detected by one green signal only at Xcen. Meta-Females (or Triple-X females) will be detected by three or more green signals at Xcen. Klinefelter will be detected by 2 or more green and 1 red signal. XYY males will be detected by one green and two red signals. Two single green (G) signals will identify the normal X chromosome in females, one green and one red signal will identify the normal X and Y chromosomes in male. Trisomy 18 will be detected by three blue signals at 18cen.
Two single blue signals will identify the normal chromosome 18.

	Normal Signal Pattern		Trisomy 18		Turner XO	Meta-female	Klinefelter	XYY
	Female	Male	Female	Male	1G2B	3-5G2B	2G1R2B 3-4G1R2B 1R1G2B /1R2G2B in mosaics	1G2R2B
Expected Signals Using X/Y/18	2G2B	1R1G2B	1G3B	1R1G2B				

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.