

## Kreatech™ FISH probes Product Information Sheet

KI-40007

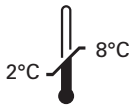
RB1 (13q14)/RCAN1 (21q22), SE X (DXZ1) / SE  
Y (DYZ3) / SE 18 (D18Z1)

500 µl

**DANGER**



**FORMAMIDE**



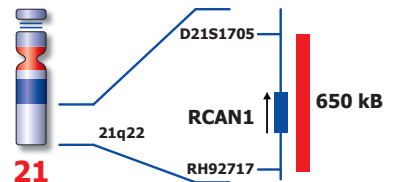
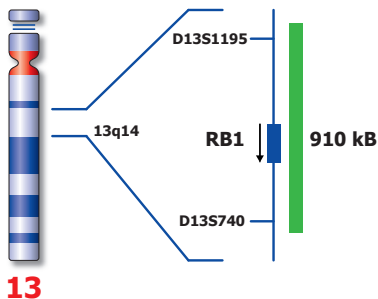
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**RUO - Research Use Only**

Not for use in diagnostic procedures

PI-KI-40007\_D2.1

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Not to scale

KI-40007

## Kreatech™ RB1 (13q14)/RCAN1 (21q22), SE X (DXZ1) / SE Y (DYZ3) / SE 18 (D18Z1) FISH probes

### Introduction:

The **Chromosome 21 specific** FISH probe is optimized to detect chromosome 21 at 21q22.  
The **Chromosome 13 specific** FISH probe is optimized to detect Chromosome 13 at 13q14.  
The **Chromosome 18 specific** Satellite Enumeration (SE) FISH probe (D18Z1) is optimized to detect Chromosome 18 at 18p11-18q11.  
The **Chromosome X specific** SE FISH probe (DXZ1) is optimized to detect Chromosome X at Xp11-Xq11.  
The **Chromosome Y specific** SE FISH probe (DYZ3) is optimized to detect Chromosome Y at Yp11-Yq11.

### Vial 1

#### Critical region 1 (red):

The **21q specific** FISH probe is direct-labeled with PlatinumBright™550.

#### Critical region 2 (green):

The **13q14 specific** FISH probe is direct-labeled with PlatinumBright™495.

### Vial 2

#### Critical region 3 (blue):

The **18 SE** FISH probe is direct-labeled with PlatinumBright™415.

#### Critical region 4 (green):

The **X SE** FISH probe is direct-labeled with PlatinumBright™495.

#### Critical region 5 (red):

The **Y SE** FISH probe is direct-labeled with PlatinumBright™550.

**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.**

### Patterns:

The **Chromosome 13/21 specific** FISH probe is designed as a dual-color assay to detect gains of chromosome 21 and 13. Trisomy 21 will be detected by three red signal at the 21q22 region and two green signals for chromosome 13 (3R2G). Trisomy 13 will be detected by 3 green signals at the 13q14 region and two red signals for chromosome 21 (2R3G). Two single color red and green signals will identify the normal chromosomes 13 and 21 (2R2G).

The **Chromosome X/Y/18 specific** FISH probe is designed as a triple color assay to detect gains or losses of chromosome X, Y and/or 18. Two single green signals will identify the normal X chromosomes in females (2G). One green and one red signal will identify the normal X and Y chromosomes in males (1R1G). Trisomy 18 will be detected by three blue signals for chromosome 18 (3B). Two single blue signals will identify the normal chromosome 18 (2B).

Expected Signals Using	Normal Signal Pattern		Trisomy 21	Trisomy 13	Trisomy 18	
	Female	Male			Female	Male
13/21	2R2G		3R2G	2R3G		
X/Y + 18	2G2B	1R1G2B			2G3B	1R1G3B

### References:

Korenberg J. et al, 1994, Proc. Nat. Acad. Sci. 91; 4997-5001  
Spathas D et al, 1994, Prenat Diagn. 14(11); 1049-1054  
Tepperberg et al, 2001, Prenat Diagn 21(4); 293-301

**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/service-support/technical-support/](http://www.LeicaBiosystems.com/service-support/technical-support/) or toll free at 800-248-0123 or via e-mail: [kreatech-support@leicabiosystems.com](mailto:kreatech-support@leicabiosystems.com).

### CUSTOMER SERVICE

Kreatech probes may be ordered through Leica Customer Service toll free at 800-248-0123 or order via e-mail: [purchase\\_orders@leica-microsystems.com](mailto:purchase_orders@leica-microsystems.com).