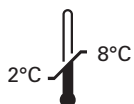


# Kreatech™ FISH probes

## Product Information Sheet

KBI-45118

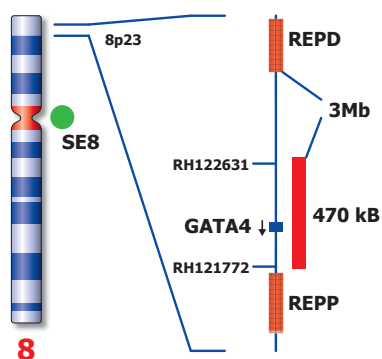
GATA4 (8p23) / SE 8



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Not to scale

## Kreatech™ GATA4 (8p23) / SE 8 FISH probe

**Introduction:** The deletion of GATA4 (8p23) is found in patients with congenital heart disease. Besides the deletion of the region, duplications are found of the region flanked by low copy repeats 8p-OR-REPD (distal) and –REPP (proximal). These recurrent deletions are associated with a spectrum of anomalies, including congenital diaphragmatic hernia, developmental delay and neuropsychiatric findings. GATA4 is expressed in adult heart, epithelium and gonads. During fetal development, GATA4 is expressed in yolk sac endoderm and cells involved in heart formation.

**Intended use:** The **GATA4 (8p23) / SE 8** FISH probe is optimized to detect deletions of the GATA4 gene region at 8p23 in a dual color assay on metaphase/interphase spreads, blood smears and bone marrow cells. The **Satellite Enumeration (SE) 8** FISH probe is included 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](http://www.LeicaBiosystems.com) and look for kits and reagents).

**Critical region 1 (red):** The **GATA4 (8p23)** gene region probe is direct-labeled with PlatinumBright™550.  
**Critical region 2 (green):** The **SE 8** 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 **GATA4 (8p23) / SE 8** FISH probe is designed as a dual color probe to detect deletions of the GATA4 gene region on chromosome 8p23. Deletion of the GATA4 region at 8p23 will show a single red signal while the control will show 2 green signals (1R2G). Duplication involving the GATA4 region will show 3 red signals and 2 green signals (3R2G). Two single color red and green signals (2R2G) will identify the normal chromosomes 8.

	Normal Signal Pattern	Deletion involving GATA4 region	Duplication involving GATA4 region
Expected Signals	2R2G	1R2G	3R2G

**References:** Bhatia et al, 1999, Prenat Diagn, 19, 863-867  
 Giorda et al, 2007, Hum Mut, 28, 459-468  
 Wat et al, 2009, Am J Med Genet Part A, 149A, 1661-1677

**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).