

Poseidon™ Repeat Free™ X-Inactivation XIST (Xq13) & SE X Control 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 **XIST** specific DNA probe is optimized to detect copy numbers of the XIST region at Xq13. The Chromosome X Satellite Enumeration (SE) Probe is added to facilitate chromosome identification.

The probe is recommended to be used in combination with a Poseidon FISH Kit providing necessary reagents to perform FISH (KBI-60002, KBI-60003 or KBI-60001) for optimal results.

Critical region 1 (red): The **XIST** specific DNA probe is direct-labeled with PlatinumBright550.

Control region 2 (green): The **SE X** control DNA probe is direct-labeled with PlatinumBright495.

Reagent: Poseidon 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 Poseidon FISH protocol.

Poseidon Repeat Free probes do not contain Cot-1 DNA. Hybridization efficiency is therefore increased and background, due to unspecific binding, is highly reduced.

Interpretation: The **XIST** 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 (R) and green (G) signals will identify the normal chromosomes X (2R2G)

	Normal Signal pattern	Del X(q13)
Expected signals Female	2R2G	1R2G
Expected signals Male	1R1G	not possible*

* However, in 47,XXY (Klinefelter) 1R2G is possible

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

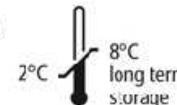
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Application Manual

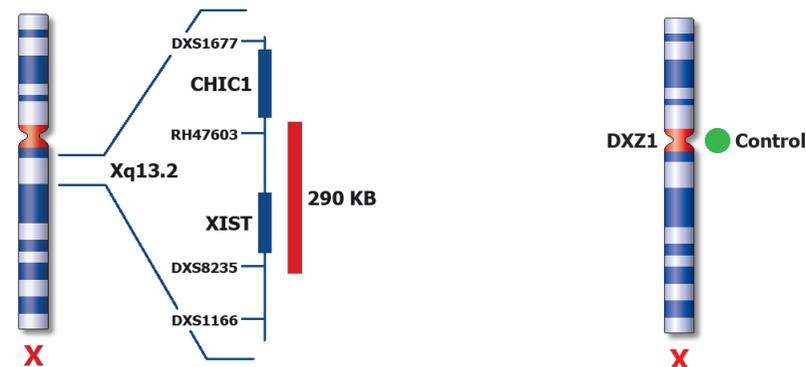
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MD X-Inactivation XIST (Xq13) / SE X



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Application manual