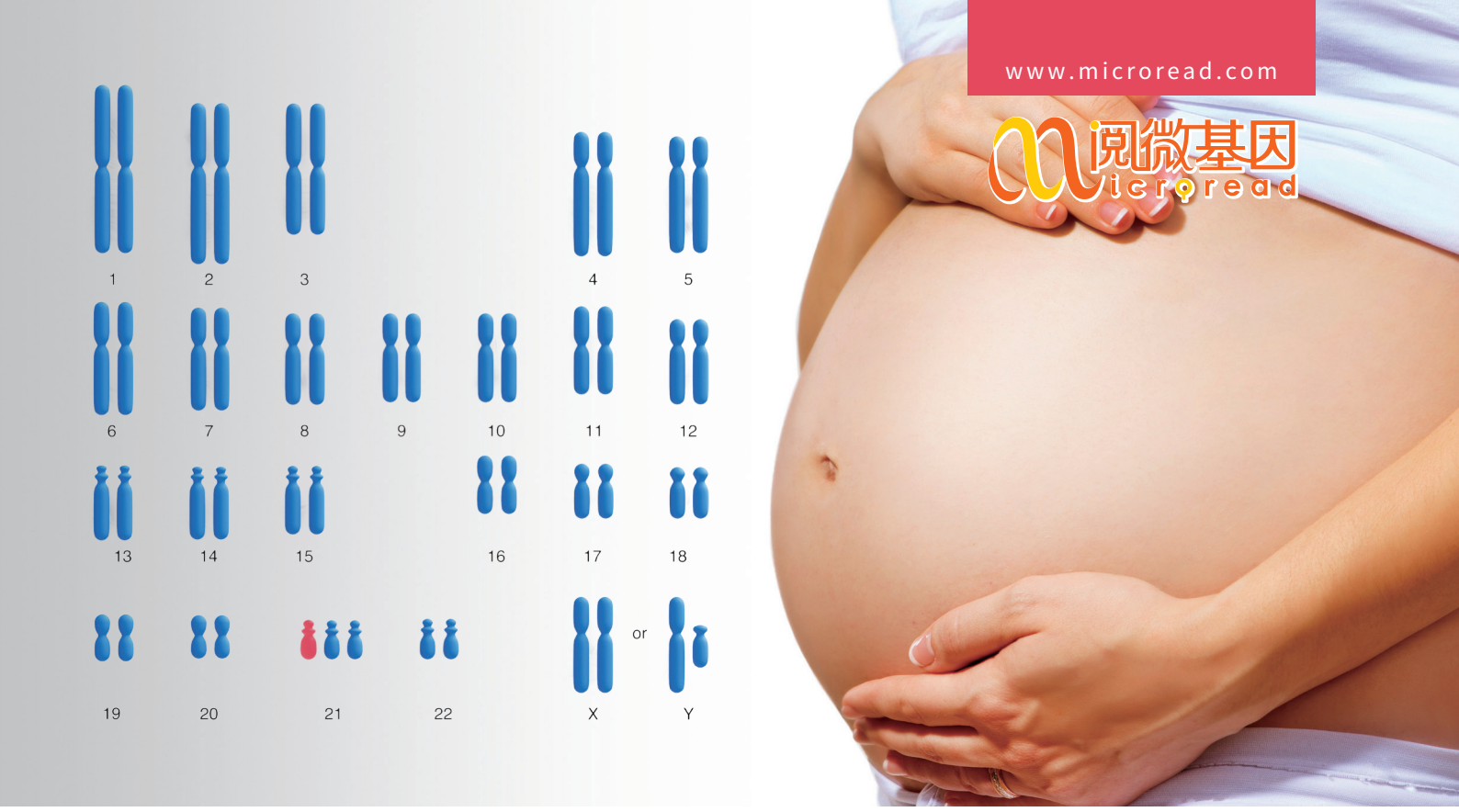


Microreader™ Chromosome Aneuploidy (T21/T18/T13/X/Y) Detection Kit

Abnormal chromosome number is one of the important causes of birth defects. Trisomy 21, trisomy 18, trisomy 13 and X/Y chromosomal abnormalities account for 95% of neonatal chromosomal abnormalities.

There are many diagnostic methods for chromosomal aneuploidy. Multiplex fluorescent PCR & capillary electrophoresis is a diagnostic technique due to its advantages of accuracy, rapidity, and low price. [1-2] In 2004, the National Screening Committee of the United Kingdom suggested that the screening of high-risk pregnant women with Down syndrome should not use the method of karyotype analysis, but directly confirm whether the fetus has Down syndrome through multiple fluorescent PCR & capillary electrophoresis.

Features

Accurate detection	This kit can detect 26 genetic loci for abnormal number of chromosomes of 21, 18, 13, X and Y, ⩾ 4 STR loci tested per chromosome
Easy to operate	Single-tube amplification, takes only 4 hours, suitable for automatic and batch detection
High sensitivity	Template DNA amount as low as 1ng gDNA
Easy to read	Professional software assists in analysis and interpretation of results, fast and accurate
UNG anti-polution	Effectively avoids PCR product contamination

For people

- Pregnant women with high risk of Down syndrome results; pregnant women aged 35 years;
- Pregnant women with fetal abnormalities revealed by ultrasound; pregnant women with unexplained Spontaneous abortion;
- Pregnant women who want to quickly predict the results of karyotype analysis.

Detection platform: multiplex fluorescent PCR and capillary electrophoresis detection

After DNA in the sample was extracted, and multiplex fluorescent PCR was used to detect 7 STR loci on chromosome 21, 5 STR loci on chromosome 18, 6 STR loci on chromosome 13, 4 STR loci on chromosome X and 4 STR loci on chromosome 13. Gender-related STS loci were amplified, and the amplified products were detected by capillary electrophoresis using a genetic analyzer, and the results were analyzed using professional software.

Detection site

Loci	chromosome location	Loci	chromosome location	Loci	chromosome location	Loci	chromosome location
LFG21	21q21.1	D18S391	18p11.21	D13S305	13q12.2	DXS6809	Xq21.33
D21S11	21q21.1	D18S1002	18q11.2	D13S325	13q13.3	DXS9895	Xp22.32
D21S1435	21q21.3	D18S535	18q12.3	D13S256	13q14.3	XHPRT	Xq26.2
D21S2052	21q21.3	D18S851	18q21.2	D13S800	13q21.33	GATA165B12	Xq25
D21S1246	21q22.2	D18S877	18q22.1	D13S317	13q22.1	AMEL	Xp22.22/Yp11.2
D21S1411	21q22.3			D13S797	13q33.2	TAF9L	Xq21.1/3p24.2
D21S1446	21q22.3					ZFXY	Xp22.11/Yp11.2
						SRY	Yp11.31

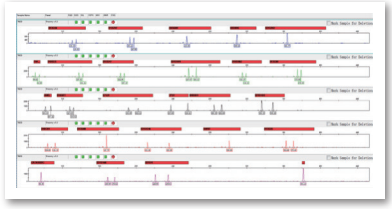
Detection process

1 DNA extraction

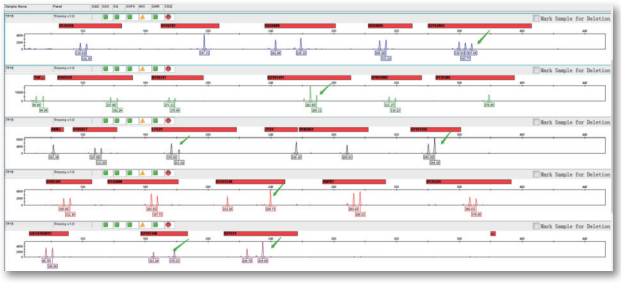
2 Establish PCR amplification system

3 Multiplex fluorescent PCR amplification detection

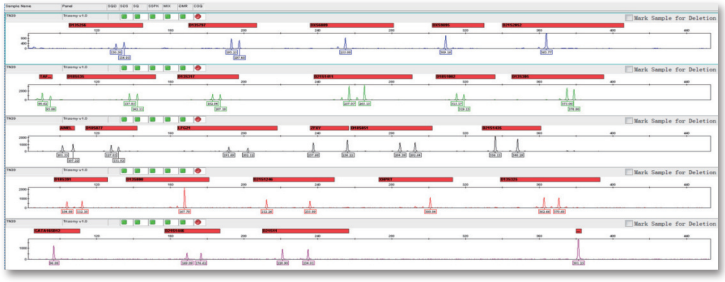
4 Detection on Capillary electrophoresis platform



Testing results



Normal male testing electrophoretogram



electrophoretogram of trisomy 21 test results: Chromosome 21 loci showed triple peaks (red arrow), unbalanced double peaks (green arrows) or single peak, and the number of alleles and peak height ratios of other chromosomal loci met expectations.

Sample type

Amniotic fluid, chorion, DNA, and other embryonic tissues

Applicable instrument

PCR machine: Life Technologies Holdings Pte Ltd: Veriti, Veriti Dx, 9700

Genetic analyzer: Life Technologies Holdings Pte Ltd: 3500 Dx, 3500 xL Dx; Sequstudio

※References :
[1] Zhu Yuning. Research on Fetal Chromosomal Abnormalities and Appropriate Prenatal Diagnosis Techniques[D]. Zhejiang University, 2015.
[2] Zhuan Jia. Rapid diagnosis of fetal chromosomal aneuploidy using QF-PCR technology[D]. Hebei Medical University, 2012.

WeChat public account

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