Noninvasive Prenatal Test(NIPT)



High Accuracy

CYGNUS S100 Gene Sequencer: Q40>80%, High sensitivity for positive detection Sensitivity and Specificity Up to 99%.

Rapid

The report is available typically withing 7 working days of the lab receiving the sample.

Safe

Noninvasive, Peripheral blood sample (5ml) from the pregnant patient.



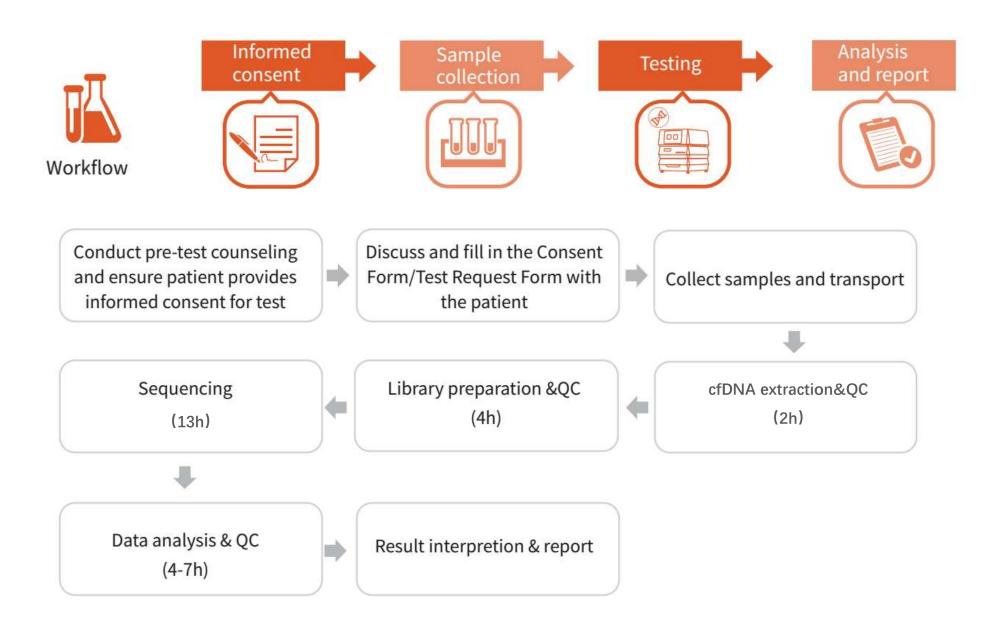
Noninvasive Prenatal Test(NIPT)

By detecting small amounts of DNA in your bloodstream from the placenta, NIPT (Noninvasive Prenatal Test, NIPT) identifies if there is an increased chance for certain chromosomal abnormalities that can affect your baby's health and development. These abnormalities are rare but often have profound consequences in the life and health of your child. Early detection means better care for you and your baby.

NIPT for certain chromosomal abnormalities called trisomies. These include trisomy 21 (Down syndrome),

trisomy 18 (Edwards syndrome) and trisomy 13 (Patau syndrome).

Whole solutions



cfDNA Extraction

The concentration of cell-free fetal DNA (cffDNA) in maternal plasma is typically low, as most cell-free DNA (cfDNA) originates from the mother, which may affect the sensitivity and specificity of NIPT testing. By using a magnetic bead kit with high binding capacity for cfDNA extraction, compatible with automated instruments, the maternal plasma volume can be as low as 300 µL.

Library preparation

- Rapid Library Construction: The kit is easy to operate and can complete library construction within 3 hours, improving the overall detection efficiency.
- **High Consistency:**The detection results maintain high consistency under various batches and experimental conditions.

Sequencing

We conduct sequencing on S100 Sequencing System.

- High-Quality Sequencing Data: The generated sequencing data exhibit a high signal-to-noise ratio and uniform coverage, facilitating subsequent bioinformatics analysis.
- Reliable Result Interpretation: The accompanying software and analysis tools provide accurate result reports and clinical interpretations.

CYGNUS Data Analysis System



Noninvasive Prenatal Test(NIPT)

Parameter	Noninvasive Prenatal Test(NIPT)	
Specimen	>5mL maternal peripheral blood	
Technology	cfDNA ligation-based library construction	
Platform	Cygnus S100 Sequencing Platform	
Read length	SE75	
No. of samples per run	22	
Chip Spec	80-100M	
Average Unique Reads / sample	3.5M	
Turn-around time Report generation	Local analysis and report system	
Turn-around time	7 working days	

Sample Requirement

Sample Type	Quantity	Requirements	Shipment
Maternal peripheral blood	>5mL	Gently invert the tube ten times immediately after blood sampling	Stored at -80 °C, shipped with dry ice within one week. Shipping with dry ice can last up to seven days.



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