The **Preimplantation genetic testing for Structural Rearrangements (PGT-SR),** is a test performed on embryo biopsies to screen embryos for chromosomal imbalances (extra or missing chromosome material) resulting from a parental structural rearrangement.

The carriers of balanced structural rearrangements present abnormalities in the structure of the chromosomes, without gains or losses in chromosomal material.

Typically, **a balanced structural rearrangement does not cause health concerns in carriers. However,** a carrier of a balanced rearrangement **has a higher risk of producing embryos with an unbalanced structural rearrangement** (gain and/or loss of chromosome segments), which may lead to infertility, failed implantation, pregnancy loss, or the birth of a child with developmental delays and multiple congenital anomalies.

Igenomix®
PART OF VITROLIFE GROUP™

www.igenomix.eu

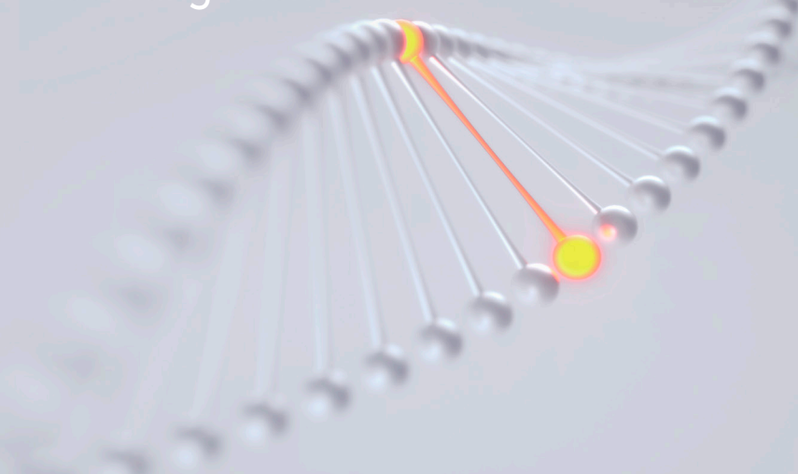
V. 2024

Smart PGT-SR

Preimplantation Genetic Testing for Chromosomal Structural Rearrangements

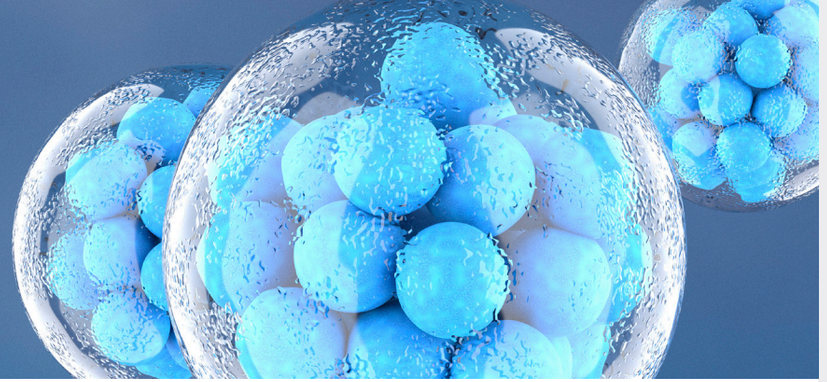
by Igenomix®

Our most advanced test designed for carriers of chromosome rearrangements



Igenomix®
PART OF VITROLIFE GROUP™

The identification of embryos which have inherited an unbalanced structural rearrangement **may help patients and clinicians to decide which embryos to transfer**



Who should consider PGT-SR?

PGT-SR is indicated for any couple in which one or both members has been identified to carry a balanced structural rearrangement, such as a:

- **Reciprocal translocation**
- **Robertsonian translocation**
- **Inversion**

Main benefits:

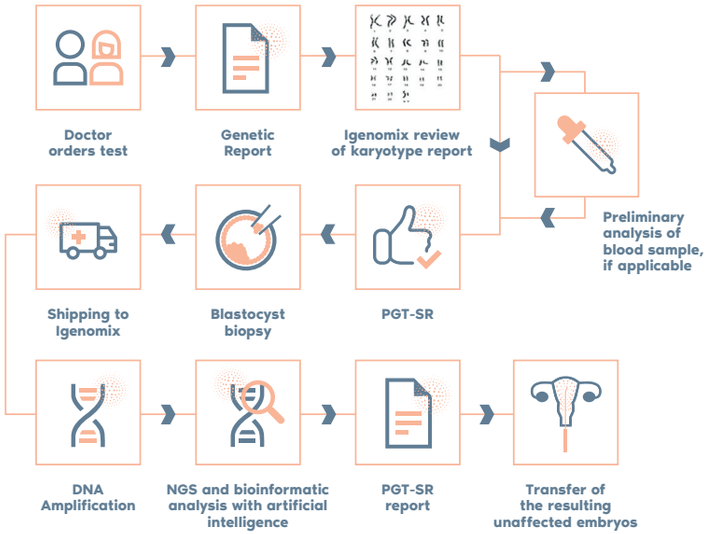
PGT-SR significantly reduces the likelihood of transferring an embryo with an unbalanced structural rearrangement, and therefore:

- **Increases pregnancy rates per transfer**
- **Reduces miscarriage rate:**
  The risk for chromosomal abnormalities in embryos is higher when one partner carries a balanced structural rearrangement.
- **Increases the likelihood of having a healthy baby**
- **Reduces the time and use of resources**

How does it work?

To assess the viability of providing PGT-SR, Igenomix will initially examine the karyotype and, if necessary, conduct a preliminary analysis to ascertain the feasibility of the procedure. Once this preliminary assessment confirms the suitability of PGT-SR, embryo biopsy samples can be sent to Igenomix for PGT-SR and numerical chromosomes abnormalities by Next Generation Sequencing (NGS).

Upon the completion of the testing, a detailed genetic report is generated and forwarded to your physician for further evaluation and discussion within **7 working days** from receipt of samples.



Smart PGT-SR PLUS

The **PGT-SR Plus** is our most advanced 4-in-1 genetic test that incorporates both NGS and SNP analysis, accessible to those seeking heightened accuracy and confidence during embryo transfer.

This comprehensive solution, in addition to the standard Smart PGT-SR method for detecting chromosomal imbalances, offers the following key features:

- **Genetic Pronuclear check and Ploidy detection**
- **Cohort Check**
- **Detection of external and internal DNA contamination**

A detailed genetic report is generated and forwarded to your physician for further evaluation and discussion within **14 working days** from receipt of samples.

Main benefits:

- Offers enhanced confidence with robust and accurate results, utilizing two independent technologies for DNA analysis.
- Reduces the risk of miscarriage due to previously undetected abnormalities (e.g. triploidy).
- Increases the number of viable embryos available for transfer by enabling the identification of diploid blastocysts derived from abnormally fertilized oocytes.
- Enhances accuracy and reduces the risk of misdiagnosis by detecting external and maternal cell DNA contamination.
- Provides confirmation of genetic relatedness between all samples in a cohort without the need for additional parental samples.