Embryo46

Next Generation Pre-Implantation Genetic Testing Solution

By inti LABS

Inti's Facebook

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What is Embryo46 ?

CNV UPD PN Check

Embryo46 is the next-generation technology for pre-implantation genetic testing, advancing PGT-A with the addition of uniparental disomy (UPD) detection and pronucleus (PN) Check through single nucleotide polymorphism (SNP) analysis. These features enable more comprehensive chromosome screening, providing further insight to optimize embryo transfer.

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PGT-A vs. Embryo46

	PGT-a	Embryo46
Chromosomal Aneuploidy (10MB CNV)	X	X
Fragment deletion / duplication (4MB CNV)		X
UPD		X
PN Check		X

Technology Highlights

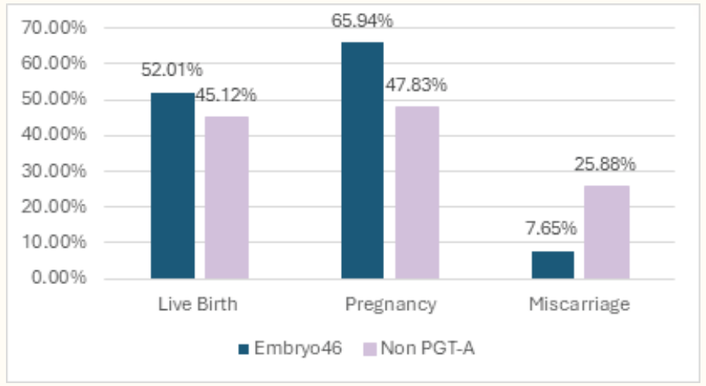
Detects copy number variation (CNV) fragments with higher 4Mb resolution and accuracy.

Optimizes the likelihood of successful pregnancy by detecting UPD through SNP analysis.

Assesses SNP linkage disequilibrium information to check for haploid and triploid embryos.

Advantages

Increases success rates: A more comprehensive analysis that improves embryo transfer outcomes resulting in higher successfully pregnancy rates, higher live birth rates, and lower miscarriage rates

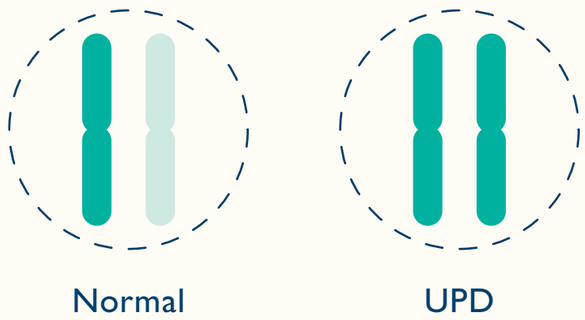


Dahdouh EM, Balayla J, et al. Fertil Steril. 2015;104(6):1503-1512.doi:10.1016/j.fertnstert.2015.08.038

- Developed by a team of scientists with over 10 years of experience in genetics, epigenetics, and clinical research.
- First in class technology protected by worldwide patents

Uniparental Disomy (UPD) Detection

Uniparental disomy (UPD), occurring in about 1 in 2000 newborns, happens when both sets of chromosomes are inherited from only one parent. This condition can arise randomly during the formation of egg or sperm cells or during early fetal development and is associated with various kind of imprinted gene diseases.



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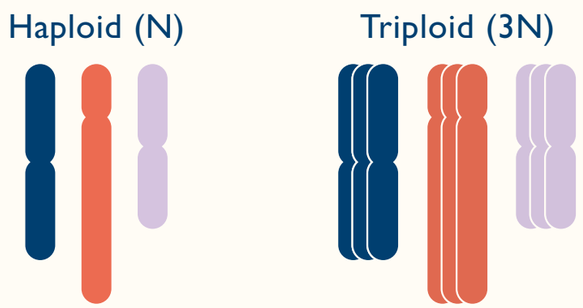
Pronucleus (PN) Check

Embryo46 can detect haploid and triploid embryos, ensuring the selection of embryos with the correct chromosome set, thereby increasing the chances of successful pregnancy. For embryos with uncertainties during fertilization, Embryo46 can assist in accurately identifying true diploid embryos, thus increasing the overall blastocyst utilization rate and the number of viable embryos available for implantation.

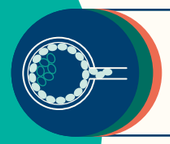


Who Should Use **Embryo46 ?**

- Older women with a higher risk of chromosomal abnormalities
- History of implantation failure
- History of miscarriage
- History of failed IVF cycle with good quality embryos

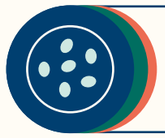
Embryo46

Sample Submission Process



Embryo Cell Biopsy

Wash cells
Pre-processing for Room Temperature
Storage and Shipment



Library Preparation

Next Generation Sequencing (NGS) Analysis

Data Analysis

- CNV
- UPD
- PN Checking

References

Dong Y, Liu D, Zou Y, et al. Preimplantation genetic testing for human blastocysts with potential parental contamination using a quantitative parental contamination test (qPCT): an evidence-based study. Reprod Biomed Online. 2023;46(1):69-79. doi:10.1016/j.rbmo.2022.08.103

Huang J, Yan L, Lu S, Zhao N, Xie XS, Qiao J. Validation of a next-generation sequencing-based protocol for 24-chromosome aneuploidy screening of blastocysts. Fertil Steril. 2016;105(6):1532-1536. doi:10.1016/j.fertnstert.2016.01.040

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About Inti Labs

Contact Inti Labs: https://intilabs.com

Inti Labs is dedicated to providing our clinical partners with tools that that consider the unique needs of each individual patient to enable more successful IVF outcomes. Further, we strive to empower patients and their families in making informed decisions at each stage of their fertility journey. Inti Labs was founded by IVF industry leaders Dr. Barry Behr and biotech start-up veteran Dr. Eric Pok Yang, each representing different aspects of the IVF process.

Dr. Eric Pok Yang, CEO

Dr. Eric Pok Yang is a distinguished figure in the field of molecular biology and genetics, with over two decades of dedicated research focused on unraveling the complexities of cellular mechanisms. With a notable focus on microRNA (miRNA), Dr. Yang' s contributions have been instrumental in shedding light on critical aspects of gene regulation, DNA repair, and cellular signaling, paving the way for novel therapeutic interventions and, more recently, endometrial receptivity. Today Dr. Yang leads the team at Inti Labs in its pursuit of developing solutions aimed at improving clinical outcomes in IVF.

Dr. Barry Behr, CTO

Dr. Barry Behr has been a pioneering figure in oocyte research for over two decades, and his work has contributed prominently to advancing our understanding of oocyte biology and improving clinical outcomes in assisted reproductive technology. During his time as a distinguished faculty member at Stanford, he spearheaded several innovative research initiatives, including novel techniques for oocyte cryopreservation, exploration of oocyte maturation processes, and advanced embryo culture techniques. With Inti Labs, Dr. Behr continues to inspire breakthroughs that hold promise for individuals and couples striving to build their families.

Gao FF, Chen L, Bo SP, et al. ChromInst: A single cell sequencing technique to accomplish pre-implantation comprehensive chromosomal screening overnight. PLoS One. 2021;16(5):e0251971. Published 2021 May 20. doi:10.1371/journal.pone.0251971

Ariad D, Yan SM, Victor AR, et al. Haplotype-aware inference of human chromosome abnormalities. Proc Natl Acad Sci U S A. 2021;118(46):e2109307118. doi:10.1073/pnas.2109307118

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