

GENOTYPE TESTING FOR TAILOR-MADE IVF TREATMENT

GENOTYPE TESTING FOR FSH-R, FSH-B AND LHCGR GENES POLYMORPHISMS IN WOMEN UNDERGOING OVARIAN STIMULATION

- Around 15% child-bearing age women are affected by infertility worldwide. In vitro fertilization is one way to assist these women to conceive.
- The treatment involves a critical step of ovarian stimulation using gonadotropins, to obtain an optimum number of mature oocytes without the risk of ovarian hyperstimulation syndrome (OHSS)

Why FSH polymorphisms?

- Two important genes have been already identified as FSH-R and FSH-B which play a vital role in to achieve ovarian stimulation in assisted reproductive technologies.
- Variations in the FSH-R and FSH-B genes can affect the IVF treatment outcomes. Timely detection can help you have a safe and optimum dose
- IVF cannot be “One size fits all”. Patient’s **genotype** will be a key to decide what dose of hormone is suitable for them.
- About 3 to 8% of the women suffer from moderate to severe form of OHSS
- Risk of hyperstimulation is more in PCOD patients and hence optimum dose is essential

Benefits of pharmacogenomics (PGx) approach in IVF treatment

- Helps in designing a tailor-made treatment for women undergoing in vitro fertilization so that a safe and tolerable dose enough for ovarian stimulation can be administered.
- May also help in choosing the type of gonadotropin (uterine vs recombinant FSH) based on the results of this test
- Minimize risk of OHSS which occurs due to excess ovarian stimulation and may result in weight gain, abdominal enlargement, pain and blood clots.
- The hormone requirement will also be different depending on whether you have normal infertility or it is associated with conditions such as endometriosis.

Our Solution



AyuGen is soon launching another cutting edge molecular genetic test for FSH - R and FSH - B variants that may make a revolutionary change in your IVF treatment

Gene	Effect of variations
FSH-R	Women who are carriers of specific variations need higher dose of gonadotropin for ovarian stimulation.
FSH-B	A particular allele is associated with poor response to ovarian stimulation.

Sample Requirement

The preferred sample is 3 mL blood in EDTA tube or buccal swab or saliva
Turn-around-time: 3 to 5 days

Who should get tested?

Women who have been recommended IVF treatment to help them conceive.



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For more information,

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References

• Conforti A, et al. Front Endocrinol. 2022 • Simoni M et al. Hum Reprod Update. 2018 • Bianco B et al. Front Endocrinol 2021

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