# Recombinant Human FSH therapeutic protein(Follitropin)

**Cat. No.** FSH-P048H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | The protein is a human follicle stimulating hormone (FSH) preparation of recombinant DNA origin, which consists of two non-covalently linked, non-identical glycoproteins designated as the alpha- and beta- subunits. The alpha- and beta- subunits have 92 and 111 amino acids. The alpha subunit is glycosylated at Asn 51 and Asn 78 while the beta subunit is glycosylated at Asn 7 and Asn 24. It is produced in genetically engineered Chinese hamster cell lines (CHO). The nomenclature "beta" differentiates it from another recombinant human FSH product that was marketed earlier as follitropin alpha. Follitropin is important in the development of follicles produced by the ovaries. Given by subcutaneous injection, it is used in combination with human chorionic gonadotropin (hCG) to assist in ovulation and fertility. Follitropin may also be used to cause the ovary to produce several follicles, which can then be harvested for use in gamete intrafallopian transfer (GIFT) or in vitro fertilization (IVF). Numerous physio-chemical tests and bioassays indicate that follitropin beta and follitropin alpha are indistinguishable. However, a more recent study showed there is may be a slight clinical difference, with the alpha form tending towards a higher pregnancy rate and the beta form tending towards a lower pregnancy rate, but with significantly higher estradiol (E2) levels. Structural analysis shows that the amino acid sequence of the protein is identical to that of natural human follicle stimulating hormone (FSH). Further, the ogliosaccharide side chains are very similar, but not completely identical to that of natural FSH. However, these small differences do not affect the bioactivity compared to natural FSH. |
| **Species** | Human |

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| **Description** | The pituitary glycoprotein hormone family includes follicle-stimulating hormone, luteinizing hormone, chorionic gonadotropin, and thyroid-stimulating hormone. All of these glycoproteins consist of an identical alpha subunit and a hormone-specific beta subunit. This gene encodes the beta subunit of follicle-stimulating hormone. In conjunction with luteinizing hormone, follicle-stimulating hormone induces egg and sperm production. Alternative splicing results in two transcript variants encoding the same protein. Our expression product is the active ingredient of Follisti, Gonal F, Gonal-F, Metrodin HP and Puregon. |
| **Molecular Mass** | 22.7 Kda |
| **AA Sequence** | >Alpha chainAPDVQDCPECTLQENPFFSQPGAPILQCMGCCFSRAYPTPLRSKKTM LVQKNVTSESTCCVAKSYNRVTVMGGFKVENHTACHCSTCYYHKS>Beta chainNS CELTNITIAIEKEECRFCISINTTWCAGYCYTRDLVYKDPARPKIQKTCTFKELVYETV RVPGCAHHADSLYTYPVATQCHCGKCDSDSTDCTVRGLGPSYCSFGEMKE |
| **Endotoxin** | < 1.0 EU per μg of the protein |
| **Purity** | >95% |
| **Storage** | Can be stored at +4 centigrade short term (1-2weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoidrepeated freezing and thawing cycles. |
| **Alias** | FSH; Follitropin |

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