

## Recombinant Human IFNAR1 therapeutic protein(Peginterferon alfa-2a)

Cat. No. IFNAR1-P004H    Lot. No. (See product label)

### SPECIFICATION

**Product Overview**

Human interferon 2a, is a covalent conjugate of recombinant alfa-2a interferon with a single branched bis-monomethoxy polyethylene glycol (PEG) chain. The PEG moiety is linked at a single site to the interferon alfa moiety via a stable amide bond to lysine. Peginterferon alfa-2a has an approximate molecular weight of 60,000 daltons. Interferon alfa-2a is produced using recombinant DNA technology in which a cloned human leukocyte interferon gene is inserted into and expressed in Escherichia coli. The resultant protein is 165 amino acids. The PEG strand protects the molecule in vivo from proteolytic breakdown, substantially increases its in vivo half-life, and reduces immunogenicity by wrapping around and physically hindering access to the protein portion of the molecule.

**Species**                      Human

**Source**                        E.coli

**ProteinLength**              165aa

**Description**

The protein encoded by this gene is a type I membrane protein that forms one of the two chains of a receptor for interferons alpha and beta. Binding and activation of the receptor stimulates Janus protein kinases, which in turn phosphorylate several proteins, including STAT1 and STAT2. The encoded protein also functions as an antiviral factor. The expression product is the active ingredient of Pegasys.

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|                       |                                                                                                                                                                                   |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Molecular Mass</b> | 60KDa                                                                                                                                                                             |
| <b>AA Sequence</b>    | CDLPQTHSLGSRRTLMLLAQMRRISLFSCCLKDRHDFGFPQEEFGNQFQKAETIPVLH<br>EMIQQIFNLFSTKD SSAAWDETL LDKFYTELYQQLNDLEACVIQGVGVTTETPLMKED<br>SILAVRKYFQRITLYLKEKKYSPCAWEV VRAEIMRSFSLSTNLQESLSKE |
| <b>Endotoxin</b>      | < 1.0 EU per µg of the protein                                                                                                                                                    |
| <b>Purity</b>         | >95%                                                                                                                                                                              |
| <b>Storage</b>        | Can be stored at +4 centigrade short term (1-2weeks). For long term storage, aliquot and store at -20 centigrade or -70 centigrade. Avoid repeated freezing and thawing cycles.   |
| <b>Alias</b>          | IFNAR1; IFNAR; IFRC; CRF2-1; IFN-R-1; AVP; IFNBR; Peginterferon alfa-2a                                                                                                           |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | IFNAR1 interferon (alpha, beta and omega) receptor 1 [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                   |
| <b>Official Symbol</b> | IFNAR1                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>        | IFNAR1; interferon (alpha, beta and omega) receptor 1; IFNAR; interferon alpha/beta receptor 1; IFRC; CRF2-1; IFN-R-1; IFN-alpha/beta receptor 1; interferon-beta receptor 1; beta-type antiviral protein; alpha-type antiviral protein; type I interferon receptor 1; cytokine receptor class-II member 1; cytokine receptor family 2 member 1; interferon-alpha/beta receptor alpha chain; AVP; IFNBR; IFN-alpha-REC; |
| <b>Gene ID</b>         | 3454                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>mRNA Refseq</b>     | NM_000629                                                                                                                                                                                                                                                                                                                                                                                                               |

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|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protein Refseq</b>      | NP_000620                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MIM</b>                 | 107450                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>UniProt ID</b>          | P17181                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Chromosome Location</b> | 21q22.1                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Pathway</b>             | Cytokine Signaling in Immune system, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Downstream signaling in naive CD8+ T cells, organism-specific biosystem; Hepatitis C, organism-specific biosystem; Hepatitis C, conserved biosystem; Herpes simplex infection, organism-specific biosystem; |
| <b>Function</b>            | receptor activity; type I interferon receptor activity;                                                                                                                                                                                                                                                                                                                                                         |

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