

Recombinant Human IFNB1

Cat. No. IFNB1-8538H **Lot. No.** (See product label)

SPECIFICATION

Product Overview A DNA sequence encoding the human interferon, beta 1, fibroblast (P01574) (Met1-Asn187) was expressed.

Species Human

Source Human Cells

ProteinLength 1-187 a.a.

Description

Interferons (IFNs) are natural glycoproteins belonging to the cytokine superfamily, and are produced by the cells of the immune system of most vertebrates in response to challenges by foreign agents such as viruses, parasites and tumor cells. IFNs are produced by a wide variety of cells in response to the presence of dsRNA, a key indicator of viral infection via a pattern recognition receptor of the innate immune system Toll Like Receptor 3 (TLR 3), and in turn assists the immune response by inhibiting viral replication within host cells, activating natural killer cells and macrophages, increasing antigen presentation to lymphocytes, and inducing the resistance of host cells to viral infection. There are three major classes of IFNs according to the receptor type through which they signal, and the type I IFNs bind to a specific receptor complex known as the IFN- alpha; receptor (IFNAR) consisting of IFNAR1 and IFNAR2 chains. The type I IFNs present in humans are IFN- alpha, IFN- beta; and IFN-ω and IFN- beta; is produced by fibroblast. In addition to the common antiviral activity, IFN- beta; also induces increased production of the p53 gene product which promotes apoptosis, and thus has therapeutic effect against certain

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cancers. Furthermore, IFN- beta; might play a beneficial role in the development of a chronic progressive CNS inflammation.

Predicted N Terminal Met 22

Form Lyophilized from sterile 50mM Hepes, PH 7.0. Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization.

Molecular Mass The recombinant human IFN β consists of 166 amino acids and predicts a molecular mass of 20 KDa. It migrates as an approximately 20-23 KDa band in SDS-PAGE under reducing conditions.

Endotoxin 1.0 eu/ μ g of the protein as determined by the lal

Purity >95 % as determined by SDS-PAGE

Stability Samples are stable for up to twelve months from date of receipt at -70°C

Storage Store it under sterile conditions at -70°C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name [IFNB1 interferon, beta 1, fibroblast \[Homo sapiens \]](#)

Official Symbol IFNB1

Synonyms IFNB1; interferon, beta 1, fibroblast; IFNB; interferon beta; IFB; IFF; IFN-beta; fibroblast interferon; MGC96956;

Gene ID [3456](#)

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mRNA Refseq	NM_002176
Protein Refseq	NP_002167
MIM	147640
UniProt ID	P01574
Chromosome Location	9p22
Pathway	Chagas disease (American trypanosomiasis), organism-specific biosystem; Chagas disease (American trypanosomiasis), conserved biosystem; Cytokine Signaling in Immune system, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; Cytokines and Inflammatory Response, organism-specific biosystem; Cytosolic DNA-sensing pathway, organism-specific biosystem;
Function	cytokine activity; interferon-alpha/beta receptor binding; transcription corepressor activity;

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