

Recombinant Human IFN-beta Protein

Catalog No.: RP02774

Sequence Information

Species **Gene ID**
Human 3456

Swiss Prot **Tags**
P01574 C-His

Synonyms
IFNB1,IFB,IFF,IFN-beta,IFNB

Product Information

Source **Purification**
HEK293 cells ≥ 95 % as
 determined by
 SDS-PAGE.

Calculated MW **Observed MW**
20.87 kDa 25-30 kDa

Endotoxin
< 0.01 EU/μg of the protein by LAL
method

Formulation

Lyophilized from a 0.22 μm filtered
solution of 25mM NaAc PH 5.0

Reconstitution

Centrifuge the vial before opening.
Reconstitute to a concentration of
0.1-0.5 mg/mL in sterile distilled
water. Avoid vortex or vigorously
pipetting the protein. For long
term storage, it is recommended
to add a carrier protein or stabilizer
(e.g. 0.1% BSA, 5% HSA, 10% FBS
or 5% Trehalose), and aliquot the
reconstituted protein solution to
minimize free-thaw cycles.

Background

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. Interferon-beta (IFN beta) is an extracellular protein mediator of host defense and homeostasis. IFN beta has well-established direct antiviral, antiproliferative, and immunomodulatory properties. Recombinant IFN beta is approved for the treatment of relapsing-remitting multiple sclerosis. The recombinant IFN beta protein has the theoretical potential to either treat or causes autoimmune neuromuscular disorders by altering the complicated and delicate balances within the immune system networks. It is the most widely prescribed disease-modifying therapy for multiple sclerosis (MS). Large-scale clinical trials have established the clinical efficacy of IFN beta in reducing relapses and slowing disease progression in relapsing-remitting MS. IFN beta therapy was shown to be comparably beneficial for opticospinal MS (OSMS) and conventional MS in Japanese. IFN beta is effective in reducing relapses in secondary progressive MS and may have a modest effect in slowing disability progression. In addition to the common antiviral activity, IFN beta also induces increased production of the p53 gene product which promotes apoptosis and thus has a therapeutic effect against certain cancers. The role of IFN-beta in bone metabolism could warrant its systematic evaluation as a potential adjunct to therapeutic regimens of osteolytic diseases. Furthermore, IFN beta might play a beneficial role in the development of chronic progressive CNS inflammation.

Basic Information

Description

Recombinant Human IFN-beta Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met22-Asn187) of human IFN-beta/IFNB1 (Accession #NP_002167.1) fused with C-His tag at the C-terminus.

Activity

Measured in a cell cytotoxicity assay using TF-1 cells. The ED₅₀ for this effect is 0.55-2.18 ng/mL, corresponding to a specific activity of 4.59×10⁵~1.83×10⁶ units/mg.

Shipping

Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

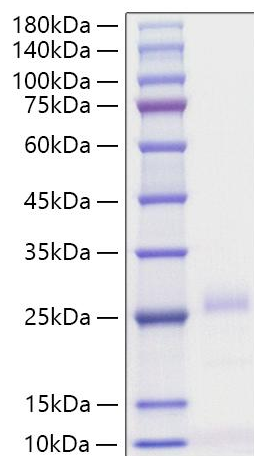
Contact

☎ | 400-999-6126

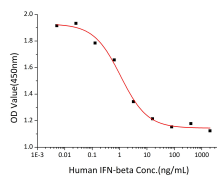
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Validation Data



Recombinant Human IFN-beta Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Measured in a cell cytotoxicity assay using TF-1 cells. The ED_{50} for this effect is 0.55-2.18 ng/mL, corresponding to a specific activity of $4.59 \times 10^5 \sim 1.83 \times 10^6$ units/mg.