10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IFN-β
Catalog # PVGS1310

Specification

IFN-β - Product Information

Primary Accession P01574
Species
Human

Sequence
Met22-Asn187

Purity
> 95% as analyzed by SDS-PAGE

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 0.1 ng/ml, measured in a proliferation assay using TF-1 Cells.

Expression System
HEK 293

Formulation **Lyophilized after extensive dialysis against PBS.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

IFN-β - Additional Information

Gene ID 3456

Other Names
Interferon beta, IFN-beta, Fibroblast interferon, IFNB1 (HGNC:5434), IFB, IFNB

Target Background
Interferon-beta (IFN-β), acting via STAT1 and STAT2, is known to upregulate and downregulate a wide variety of genes, most of which are involved in the antiviral immune response. It is a member of Type I IFNs, which include IFN-α, -β, τ, and –ω. IFN-β plays an important role in inducing

non-specific resistance against a broad range of viral infections. It also affects cell proliferation and modulates immune responses.

IFN-β - Protein Information

Name IFNB1 (HGNC:5434)

Synonyms IFB, IFNB

Function
Type I interferon cytokine that plays a key role in the innate immune response to infection, developing tumors and other inflammatory stimuli (PubMed:10049744, PubMed:10556041, PubMed:6157094, PubMed:6171735, PubMed:7665574, PubMed:8027027, PubMed:8969169). Signals via binding to high-affinity (IFNAR2) and low-affinity (IFNAR1) heterodimeric receptor, activating the canonical Jak-STAT signaling pathway resulting in transcriptional activation or repression of interferon-regulated genes that encode the effectors of the interferon response, such as antiviral proteins, regulators of cell proliferation and differentiation, and immunoregulatory proteins (PubMed:10049744, PubMed:10556041, PubMed:7665574, PubMed:8027027, PubMed:8969169). Signals mostly via binding to a IFNAR1-IFNAR2 heterodimeric receptor, but can also function with IFNAR1 alone and independently of Jak-STAT pathways (By similarity). Elicits a wide variety of responses, including antiviral and antibacterial activities, and can regulate the development of B-cells, myelopoiesis and lipopolysaccharide (LPS)- inducible production of tumor necrosis factor (By similarity). Plays a role in neuronal homeostasis by regulating dopamine turnover and protecting dopaminergic neurons: acts by promoting neuronal autophagy and alpha-synuclein clearance, thereby preventing dopaminergic neuron loss (By similarity). IFNB1 is more potent than interferon-alpha (IFN- alpha) in inducing the apoptotic and antiproliferative pathways required for control of tumor cell growth (By similarity).

Cellular Location
Secreted.

IFN-β - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IFN-β - Images