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IFN-λ1

Catalog # PVGS1047

Specification

IFN-λ1 - Product Information

Primary Accession Q8IU54

Species
Human

Sequence
Gly20-Thr200

Purity
> 97% as analyzed by SDS-PAGE
> 97% as analyzed by HPLC

Endotoxin Level
< 1 EU/ μg of protein by LAL method

Biological Activity
Fully biologically active when compared to standard. The ED₅₀ as determined by an anti-viral assay using human HepG2 cells infected with encephalomyocarditis is less than 5.0 ng/ml, corresponding to a specific activity of > 2.0 × 10⁵ IU/mg.

Expression System
E. coli

Theoretical Molecular Weight
19.8 kDa

Formulation **Lyophilized from a 0.2 μm filtered solution in PBS, pH 7.4.**

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 sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

IFN-λ1 - Additional Information

Gene ID 282618

Other Names
Interferon lambda-1, IFN-lambda-1, Cytokine Zcyto21, Interleukin-29, IL-29, IFNL1, IL29, ZCYTO21

Target Background

IL-28A, IL-28B, and IL-29, also named interferon-λ2 (IFN-λ2), IFN-λ3, and IFN-λ1, respectively, are newly identified class II cytokine receptor ligands that are distantly related to members of the IL-10 family (11-13% aa sequence identity) and the type I IFN family (15-19% aa sequence identity). The expression of IL-28A, B, and IL-29 is induced by virus infection or double-stranded RNA. All three cytokines exert bioactivities that overlap those of type I IFNs, including antiviral activity and up-regulation of MHC class I antigen expression. The three proteins signal through the same heterodimeric receptor complex that is composed of the IL-10 receptor β (IL-10 Rβ) and a novel IL-28 receptor α (IL-28 Rα, also known as IFN-λR1). Ligand binding to the receptor complex induces Jak kinase activation and STAT1 and STAT2 tyrosine phosphorylation.

IFN-λ1 - Protein Information

Name IFNL1

Synonyms IL29, ZCYTO21

Function
Cytokine with antiviral, antitumour and immunomodulatory activities. Plays a critical role in the antiviral host defense, predominantly in the epithelial tissues. Acts as a ligand for the heterodimeric class II cytokine receptor composed of IL10RB and IFNLR1, and receptor engagement leads to the activation of the JAK/STAT signaling pathway resulting in the expression of IFN-stimulated genes (ISG), which mediate the antiviral state. Has a restricted receptor distribution and therefore restricted targets: is primarily active in epithelial cells and this cell type-selective action is because of the epithelial cell-specific expression of its receptor IFNLR1. Exerts an immunomodulatory effect by up-regulating MHC class I antigen expression.

Cellular Location
Secreted.

IFN-λ1 - 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

IFN-λ1 - Images