DATASHEET
Version 20181206

IFN-λ1, Human

Cat. No.: Z02742-20

Size: 20.0 ug

Synonyms: Interferon-λ1 (IFN-λ1), Human;

Description:

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.

Amino Acid Sequence:

```
00001 GPVPTSKPTT TGKGCHIGRF KSLSPQELAS FKKARDALEE
00041 SLKLKNWSCS SPVFPGNWDL RLLQVRERPV ALEAELALTL
00081 KVLEAAAGPA LEDVLDQPLH TLHHILSQLQ ACIQPQPTAG
00121 PRPRGRLHHW LHRLQEAPKK ESAGCLEASV TFNLFRLLTR
00161 DLKYVADGNL CLRTSTHPES T
```

Source: *E. coli*

Species: Human

Biological Activity: Fully biologically active when compared to standard. The ED_{50} as determined by an anti-viral assay using human HepG2 cells infected with encephalomyocarditis is less than 5 ng/ml, corresponding to a specific activity of > 2.0×10^5 IU/mg.

Molecular Weight: Approximately 19.8 kDa, a single non-glycosylated polypeptide chain containing 181 amino acids.

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

Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Reconstitution: We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Purity: > 97 % by SDS-PAGE and HPLC analyses.

Endotoxin Level: Less than 1 EU/μg of rHuIFN-λ1/IL-29 as determined by LAL method.

Storage: This lyophilized preparation is stable at 2-8 °C, but should be kept at -20 °C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8 °C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20 °C to -70 °C. Avoid repeated freeze/thaw cycles.

GenScript USA, Inc.
860 Centennial Ave. Piscataway, NJ 08854
Tel: 1-877-436-7274; 1-732-885-9188