

**DESCRIPTION**

**Source** *E. coli*-derived  
Ala23-Leu179 with an N-terminal Met  
Accession # K9M1U5

**N-terminal Sequence Analysis** Met, Ala23

**Predicted Molecular Mass** 18 kDa

**SPECIFICATIONS**

**SDS-PAGE** 19 kDa, reducing conditions

**Activity** Measured in an anti-viral assay using HepG2 human hepatocellular carcinoma cells infected with encephalomyocarditis (EMC) virus. Sheppard, P. *et al.* (2003) *Nat. Immunol.* **4**:63. The ED<sub>50</sub> for this effect is 0.2-1.2 µg/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >85%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in Citric Acid and CHAPS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

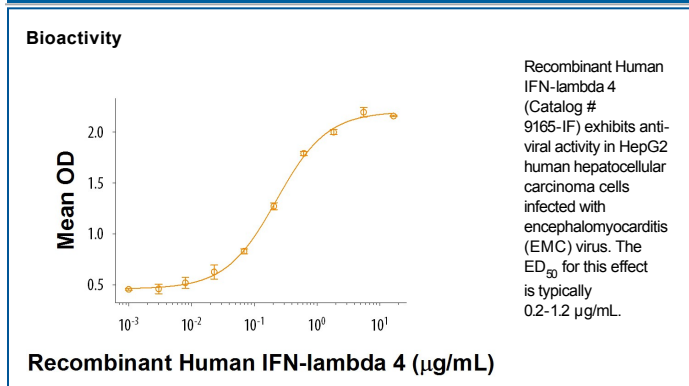
**Reconstitution** Reconstitute at 250 µg/mL in water.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**DATA**



**BACKGROUND**

Interferon-lambda 4 (IFN-λ4) is a secreted, approximately 17 kDa member of the type III interferon family of molecules (1). It is generated by a frameshift mutation based on a TT > ΔG polymorphism (2). The TT allele inactivates expression of IFN-λ4 (2). The ΔG allele is associated with reduced clearance of hepatitis C virus and reduced degranulation of CTL, NK, and NKT cells in the liver during hepatitis (2, 3), although IFN-λ4 itself shows *in vitro* activity against hepatitis C virus (4). IFN-λ4 is expressed in the liver of some chronic hepatitis C patients (5). It signals through a receptor complex containing IL-28 R/IFN-λ R1 and IL-10 Rβ to induce the expression of several interferon stimulated genes (ISG) (2, 4). Alternative splicing generates additional isoforms with large internal deletions or a substituted C-terminal region.

**References:**

1. Wack, A. *et al.* (2015) *Nat. Immunol.* **16**:802.
2. Prokunina-Olsson, L. *et al.* (2013) *Nat. Genet.* **45**:164.
3. Jouvin-Marche, E. *et al.* (2014) *J. Infec. Dis.* **209**:1907.
4. Hamming, O.J. *et al.* (2013) *EMBO J.* **32**:3055.
5. Amanzada, A. *et al.* (2013) *PLoS One* **8**:e84026.