

## IFN-omega Protein, Human, Recombinant

### General Information

Synonyms:	IFN Omega;IFN- $\omega$
Protein Construction:	Cys24-Ser195
Species:	Human
Expression Host:	E. coli
Accession:	P05000
Molecular Weight:	20 kDa (Predicted)

### QC Testing

Biological Activity:	Fully biologically active when compared to standard. The ED 50 as determined by a chemotaxis bioassay using human TF-1 cells is less than 0.01 ng/ml, corresponding to a specific activity of $> 1.0 \times 10^8$ IU/mg.
Purity:	$> 97\%$ as determined by SDS-PAGE; $> 97\%$ as determined by HPLC
Endotoxin:	$< 1.0$ EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS, pH 7.4.

### Preparation and Storage

#### 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.

#### Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at  $-70^{\circ}\text{C}$  or  $-20^{\circ}\text{C}$ . Upon reconstitution, the product should be stable for up to 1 week at  $4^{\circ}\text{C}$  or up to 3 months at  $-20^{\circ}\text{C}$ . Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Interferon-Omega (IFN- $\omega$ ) coded by IFNW1 gene in human, is a member of the type I interferon family, which includes IFN- $\alpha$ , IFN- $\beta$ , and IFN- $\omega$ . The IFNAR-1/IFNAR-2 receptor complex can help with the signal transduction, followed the antiviral or the antiproliferative actions. IFN- $\omega$  is derived from IFN- $\alpha/\beta$  and share 75% sequence with IFN- $\alpha$ . It has two intramolecular disulfide bonds which are crucial for activities. Mire-Sluis et al have described bioassays for IFN- $\alpha$ , IFN- $\beta$ , and IFN- $\omega$  that exploit the ability of these factors to inhibit proliferation of TF-1 cells induced by GM-CSF. The bioassays can be used also with Epo and TF-1 cells, or Epo and Epo-transfected UT-7 cells.

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