

## Recombinant Human Interferon-gamma (rHuIFN-γ)

## **ChemWhat Technical Data Sheet (TDS)**

Catalog Number:

106-06

Source:

Escherichia coli.

Molecular Weight:

Approximately 16.9 kDa, a single non-glycosylated polypeptide chain containing 144 amino acids.

Quantity:

 $20\mu g/100\mu g/1000\mu g$ 

AA Sequence:

 ${\tt MQDPYVKEAE} \ {\tt NLKKYFNAGH} \ {\tt SDVADNGTLF} \ {\tt LGILKNWKEE} \ {\tt SDRKIMQSQI}$ 

VSFYFKLFKN FKDDQSIQKS VETIKEDMNV KFFNSNKKKR DDFEKLTNYS

VTDLNVQRKA IHELIQVMAE LSPAAKTGKR KRSQMLFRGR RASQ

**Purity:** 

> 98 % by SDS-PAGE and HPLC analyses.

**Biological Activity:** 

Fully biologically active when compared to standard. The  $\mathrm{ED}_{50}$  as measured in anti-viral assays using

human HeLa cells infected with encephalomyocarditis (EMC) virus is 0.15-0.80 ng/ml.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

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

Endotoxin:

Less than 1 EU/µg of rHuIFN-y as determined by LAL method.

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  $\leq$  -20  $\mathbb C$ . Further dilutions should be made in appropriate buffered solutions.

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.

Usage:

ChemWhat Limited in UK offers this branded product for research, development or further

evaluation purposes. NOT FOR HUMAN USE.

## Human Interferon-gamma

Interferon-gamma (IFN- $\gamma$ ), also known as Type II interferon or immune interferon, is a cytokine produced primarily by T-lymphocytes and natural killer cells. The protein shares no significant homology with IFN- $\beta$  or the various IFN- $\alpha$  family proteins. Mature IFN- $\gamma$  exists as noncovalently-linked homodimers. Human IFN- $\gamma$  is highly species specific and is biologically active only in human and primate cells. IFN- $\gamma$  was originally characterized based on its antiviral activities. The protein also exerts antiproliferative, immunoregulatory and proinflammatory activities and is thus important in host defense mechanisms. IFN- $\gamma$  induces the production of cytokines, upregulates the expression of class I and II MHC antigens, Fc receptor and leukocyte adhesion molecules. It modulates macrophage effector functions, influences isotype switching and potentiates the secretion of immunoglobulins by B cells. IFN- $\gamma$  also augments TH1 cell expansion and may be required for TH1 cell differentiation.

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