Recombinant Human IFN-γ Protein

Catalog Number: GMP-TL105

Product Name	
Generic Name	Recombinant Human IFN-γ Protein
Synonym	Interferon-gamma, Interferon-γ

Product Information	
Protein sequence	Accession # AAH70256 Q24-Q166
Expression Host	HEK293 cells
QC Testing Purity	> 90 % as determined by SDS-PAGE
Activity	Measured in anti-viral assays protecting human amniotic cells (WISH) from the destructive effects of vesicular stomatitis virus (VSV). The ED_{50} for this effect is ≤50 ng/mL.
Endotoxin Level	< 0.1 EU per 1 μg of the protein by the LAL method.
Molecular Mass	Predicts a molecular mass of 17.6 kD.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 6 % mannitol are added as protectants before lyophilization.
Stability & Storage	24 months at 2 °C to 8 °C in lyophilized state. 6 months at -20 °C under sterile conditions after reconstitution. 12 months at -80 °C under sterile conditions after reconstitution. Recommend to aliquot the protein into smaller quantities after reconstituting with water for injection, normal saline or PBS, and keep the diluted concentration above 100 μg/mL. Avoid repeated freeze-thaw cycles.

Background

IFN-γ is produced by a variety of immune cells under inflammatory conditions, notably by T cells and NK cells. IFN-γ exerts a wide range of immunoregulatory activities and plays a key role in host defense by promoting the development and activation of Th1 cells, chemoattraction and activation of monocytes and macrophages, up-regulation of antigen presentation molecules, and immunoglobulin class switching in B cells. It also exhibits antiviral, antiproliferative, and apoptotic effects. In addition, IFN-γ has a strong inhibitory effect on the activation, proliferation and secretion of extracellular matrix of hepatic stellate cells (HSC), and it can inhibit collagen synthesis and promote collagen degradation.

References

1. Wang Y, Dai H, Li H, Lv HY,Wang T, Fu XB,and Han WD (2011) Growth of Human Colorectal Cancer SW1116 Cells Is Inhibited by Cytokine-Induced Killer Cells. Clinical and Developmental Immunology 2011 (1740-2522):621414.

2. Sangiolo D, Mesiano G, F Carnevale-Schianca, W Piacibello, M Aglietta and A Cignetti (2009) Cytokine induced killer cells as adoptive immunotherapy strategy to augment graft versus tumor after hematopoietic cell transplantation. Expert Opin. Biol. Ther. 9(7):831-840.