INTERFERON-GAMMA (IFN-γ)
Porcine, Recombinant
Expressed in E. coli

Product Number I 8654

Product Description
Recombinant Porcine Interferon-γ (IFN-γ) is produced from a DNA sequence encoding the mature porcine IFN-γ protein. Porcine IFN-γ, a 146 amino acid protein, has a predicted molecular mass of approximately 17.3 kDa. Porcine IFN-γ is highly species specific, yet shares approximately 60% amino acid sequence identity with human IFN-γ.

Interferon-γ (IFN-γ), a type II or immune interferon, is produced primarily by T lymphocytes and natural killer cells stimulated by alloantigens, tumors, and mitogens. IFN-γ exerts a variety of biological effects including antiviral activity, inhibition of cell or tumor growth, and promotion of differentiation of B cells into immunoglobulin-producing cells. IFN-γ, originally characterized based on its antiviral activities, is a potent modulator of immune responses and modifies cellular processes. It functions as an activating factor, priming macrophages for non-specific tumorcidal activity. IFN-γ activates monocytes to exert enhanced cytotoxicity against tumor cells. It also boosts cytotoxicity of natural killer cells and stimulates T cell cytotoxicity. IFN-γ acts as a signal for the major histocompatibility antigen expression system.

The species specificity of IFN-γ resides in the interaction of IFN-γ with its receptor. The IFN-γ receptor is expressed on T cells, B cells, macrophages, polymorphonuclear leukocytes, and platelets. It is not found on erythrocytes. The receptor is also expressed on epithelial cells, endothelial cells, and many tumor cells.

Reagents
Recombinant Porcine Interferon-γ (IFN-γ) is supplied as approximately 50 µg of protein lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS) containing 2.5 mg of bovine serum albumin.

Preparation Instructions
Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) containing at least 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of no less than 25 µg/ml.

Storage/Stability
Store at −20 °C. Upon reconstitution, store at 2 °C to 8 °C for one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

Product Profile
Recombinant Porcine Interferon-γ (IFN-γ) is measured in an anti-viral assay using porcine PK-15 cells infected with EMC virus.

The ED₅₀ for this effect is typically 0.015 µg/ml to 0.045 ng/ml.

The ED₅₀ is defined as the effective concentration of growth factor that elicits a 50% increase in cell growth in a cell based bioassay.

Purity: > 97% as determined by SDS-PAGE, visualized by silver stain.

Endotoxin level is < 0.1 ng/µg protein as determined by the LAL (Limulus amebocyte lysate) method.

References