

# Recombinant Murine Interferon-gamma (rMuIFN- $\gamma$ )

## PrimeGene Technical Data Sheet

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| <b>Catalog Number:</b>          | 126-06  |
| <b>Source:</b>                  | <i>Escherichia coli</i> .   |
| <b>Molecular Weight:</b>        | Approximately 15.5 kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.   |
| <b>Quantity:</b>                | 100 $\mu$ g/500 $\mu$ g/1mg   |
| <b>AA Sequence:</b>             | HGTVIESLES LNNYFNSSGI DVEEKSLFLD IWRNWQKDGD MKILQSQIIS FYLRLFEVLK<br>DNQAISNNIS VIESHLITTF FSNSKAKKDA FMSIAKFEVN NPQVQRQAFN ELIRVVHQLL<br>PESSLRKRKR SRC  |
| <b>Purity:</b>                  | > 96 % by SDS-PAGE and HPLC analyses.   |
| <b>Biological Activity:</b>     | Fully biologically active when compared to standard. The ED <sub>50</sub> as determined by an anti-viral assay using murine L929 cells infected with encephalomyocarditis (EMC) virus is less than 0.8 ng/ml, corresponding to a specific activity of > 1.3 $\times$ 10 <sup>6</sup> IU/mg.   |
| <b>Physical Appearance:</b>     | Sterile Filtered White lyophilized (freeze-dried) powder.   |
| <b>Formulation:</b>             | Lyophilized from a 0.2 $\mu$ m filtered solution in 20 mM Tris-HCl pH8.0, 300 mM NaCl, containing 5 % trehalose, 0.05 % Tween-20.   |
| <b>Endotoxin:</b>               | Less than 1 EU/ $\mu$ g of rMuIFN- $\gamma$ as determined by LAL method.  |
| <b>Reconstitution:</b>          | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled 20 mM Tris-HCl pH8.0 with 50 mM NaCl to a concentration of 0.1-0.3 mg/ml. Stock solutions should be apportioned into working aliquots and stored at $\leq$ -20 °C. Further dilutions should be made in appropriate buffered solutions. |
| <b>Shipping:</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.   |
| <b>Stability &amp; Storage:</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>                              |
| <b>Usage:</b>                   | This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>  |

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### ***Murine 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. It shares high sequence identity with rat IFN- $\gamma$  (86 %). 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. Additionally, IFN- $\gamma$  augments TH1 cell expansion and may be required for TH1 cell differentiation.