

## Recombinant Murine Interferon-gamma(rMuIFN-γ) Product Manual

### ◆Cat.No.: GXP87105

### ◆Description

Interferon-gamma (IFN-γ), 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-β or the various IFN-α family proteins. Mature IFN-γ exists as noncovalently-linked homodimers. It shares high sequence identity with rat IFN-γ (86 %). IFN-γ 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-γ 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-γ augments TH1 cell expansion and may be required for TH1 cell differentiation. Recombinant murine IFN-γ is a 15.5kDa globular protein containing 133 amino acid residues.

### ◆Product Information

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|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name        | Recombinant murine Interferon-gamma(rMuIFN- γ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Source              | Expressed in <i>E. coli</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Molecular weight    | Approximately 15.5kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Accession           | His23-Cys155                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| AA Sequence         | HGTVIESLESNNYFNSSGIDVEEKSLFLDIWRNWQKDGMKILQSQIISFYLRLEVLKDNQAISNNIS<br>VIESHLITFFSNSKAKKDAFMSIAKFEVNNPQVQRQAFNELIRVVHQLLPESLRKRKRSRC                                                                                                                                                                                                                                                                                                                                                                                              |
| Purity              | >97% by SDS-PAGE or HPLC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Biological activity | 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 0.8ng/ml, corresponding to a specific activity of >1.3×10 <sup>6</sup> IU/mg                                                                                                                                                                                                                                                   |
| Formulation         | Lyophilized from a 0.2μm filtered concentrated solution in 20 mM Tris-HCl pH8.0, 300 mM NaCl, containing 5% trehalose, 0.05% Tween-20.                                                                                                                                                                                                                                                                                                                                                                                            |
| Endotoxin level     | <0.1EU/μg rMuIFN- γ protein as determined by LAL method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Reconstitution      | <p><b>Before use this product, please read the direction below carefully.</b></p> <ol style="list-style-type: none"> <li>1、 This vial must be briefly centrifuged prior to opening to bring the contents to the bottom.</li> <li>2、 Reconstitute in a sterile aqueous buffer 20 mM Tris-HCl pH8.0 with 50 mM NaCl to a concentration of 0.1-0.3 mg/ml.</li> </ol> <p>Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C . Further dilutions should be made in appropriate buffered solutions.</p> |
| Storage/ Stability  | <p>White lyophilized powder. For long term storage, the product should be stored ≤ -20 °C.</p> <p>36 months, -20 to -70 °C as supplied.</p> <p>1 month, 2 to 8 °C under sterile conditions after reconstitution;</p> <p>3 months, -20 to -70 °C under sterile conditions after reconstitution.</p>                                                                                                                                                                                                                                |

**Please avoid repeated freeze-thaw cycles.**

**THIS PRODUCT IS FOR RESEARCH, LABORATORY AND EVALUATION PURPOSE ONLY.**

官方网址: [www.genesion.com.cn](http://www.genesion.com.cn)

订货热线: 4006-169-114、020-84224925

Email: whiga22@126.com

