



## Recombinant Rat IFN-gamma

20150227BB



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

|                  |                            |
|------------------|----------------------------|
| <b>Cat.-no.:</b> | <b>R20-004</b>             |
| Size:            | 100 µg                     |
| Lot. No.:        | According to product label |

### Scientific Background

|                        |              |
|------------------------|--------------|
| <b>Gene-ID (NCBI):</b> | 25712        |
| <b>Synonyms:</b>       | Ifng; IFNG2; |

IFN- $\gamma$  is an acid-labile interferon produced by CD4 and CD8 T lymphocytes as well as activated NK cells. IFN- $\gamma$  receptors are present in most immune cells, which respond to IFN- $\gamma$  signaling by increasing the surface expression of class I MHC proteins. This promotes the presentation of antigen to T-helper (CD4+) cells. IFN- $\gamma$  signaling in antigen-presenting cells and antigen-recognizing B and T lymphocytes regulate the antigen-specific phases of the immune response. Additionally, IFN- $\gamma$  stimulates a number of lymphoid cell functions including the anti-microbial and anti-tumor responses of macrophages, NK cells, and neutrophils. Human IFN- $\gamma$  is species-specific and is biologically active only in human and primate cells. Recombinant rat IFN- $\gamma$  is a 15.6 kDa protein containing 135 amino acid residues.

### Sequence

```
MQGTLIESLE SLKNYFNSSS MDAMEGKSL LDIWRNWQKD  
GNTKILESQI ISFYLRLEFEV LKDNQAISNN ISVIESHLIT  
NFFSNSKAKK DAFMSIAKFE VNNPQIQHKA VNELIRVIHQ  
LSPESSLRKR KR SRC
```

### Database References

|                        |             |
|------------------------|-------------|
| <b>Protein RefSeq:</b> | NP_620235.1 |
| <b>Uniprot ID:</b>     | P01581      |
| <b>mRNA RefSeq:</b>    | NM_138880.2 |

### Product Specifications

|                        |                                    |
|------------------------|------------------------------------|
| <b>Expressed in</b>    | E. coli                            |
| <b>Purity</b>          | > 98% by SDS-PAGE & HPLC analyses  |
| <b>Endotoxin level</b> | < 0.1 ng /µg of protein (<1EU/µg). |
| <b>Formulation</b>     | lyophilized                        |
| <b>Length (aa):</b>    | 135                                |
| <b>MW:</b>             | 15.6 kDa                           |

**Biological Activity:** The ED50 as determined by a cytopathic affect inhibition assay with murine L929 cells challenged with EMC virus was  $\leq 0.1$  ng/ml, corresponding to a specific activity of  $\geq 1 \times 10^7$  units/mg.



**AVOID REPEATED FREEZE AND THAW CYCLES!**