

IFN- γ , Rat

Cat. No.: Z03274-50

Size: 50.0 ug

Synonyms: Type II interferon, T cell interferon, MAF

Description:

Interferon gamma (IFN- γ), also known as Type II interferon, is a cytokine produced primarily by T-lymphocytes and natural killer cells. The active form of IFN- γ is an antiparallel dimer that interacts with the receptor IFN- γ R1 and activates the IFN- γ /JAK/STAT pathway. IFN- γ signaling promotes biological functions primarily related to antiviral and antibacterial defense, apoptosis, inflammation, and regulation of innate and acquired immune responses. While IFN- γ -induced inflammatory cascades summon a variety of immune-related cell types, such as macrophages, natural killer (NK) cells and cytotoxic T lymphocytes (CTLs), IFN- γ is also implicated in resistance to NK cell and CTL responses and in immune escape in a variety of cancers.

Recombinant Rat Interferon gamma (IFN- γ) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 134 amino acids. A fully biologically active molecule, rIFN- γ has a molecular mass of 15.5 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

Amino Acid Sequence:

```
00001 GTLIESLES LKNYFNSSMD AMEGKSLLLD IWRNWQKDG N  
00041 TKILESQIIS FYLR LFEVLK DNQAISNNIS VIESHLITNF  
00081 FSN SKAKKDA FMSTAKFEVN NPQIQHKAVN ELIRVIHQLS  
00121 PESSLRKRKR SRC
```

Source: *E. coli*

Species: Rat

Biological Activity: ED₅₀ <0.5 ng/ml, measured by cytotoxicity assay using WEHI-279 cells, corresponding to a specific activity of >2×10⁶ units/mg.

Molecular Weight: 15.5 kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O or PBS at 100 μ g/ml.

Purity: > 95% as analyzed by SDS-PAGE and HPLC.

Endotoxin Level: < 0.2 EU/ μ g, determined by LAL method.

Storage: Lyophilized recombinant Rat IFN- γ remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, recombinant Rat IFN- γ should be stable up to 1 week at 4°C or up to 2 months at -20°C.