

Mouse Interferon- γ (mIFN- γ)

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MW (kDa):	UniProt ID:	Entrez-Gene Id:
13	#P01580	15978

Background

IFN- γ plays key roles in both the innate and adaptive immune response. IFN- γ activates the cytotoxic activity of innate immune cells such as macrophages and NK cells (1,2). IFN- γ production by NK cells and antigen-presenting cells (APCs) promotes cell-mediated adaptive immunity by inducing IFN- γ production by T lymphocytes, increased class I and class II MHC expression, and enhancing peptide antigen presentation (1). The anti-viral activity of IFN- γ is due to its induction of PKR and other regulatory proteins. Binding of IFN- γ to the IFNGR1/IFNGR2 complex promotes dimerization of the receptor complexes. Binding induces a conformational change in receptor intracellular domains and signaling involves Jak1, Jak2, and Stat1 (3). The critical role of IFN- γ in amplification of immune surveillance and function is supported by increased susceptibility to pathogen infection by IFN- γ or IFNGR knockout mice, and in humans with inactivating mutations in IFNGR1 or IFNGR2. IFN- γ also appears to have a role in atherosclerosis (4).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g mIFN- γ .

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant mIFN- γ . All lots are greater than 98% pure.

Source / Purification

Recombinant mouse IFN- γ (mIFN- γ) His23-Cys155 (Accession # NP_032363) was produced in *E. coli* at Cell Signaling Technology.

Bioactivity

The bioactivity of mIFN- γ was determined in a virus protection assay. The ED₅₀ of each lot is between 30-150 pg/ml.

Background References

- Schroder, K. et al. (2004) *J Leukoc Biol* 75, 163-89.
- Martinez, F.O. et al. (2009) *Annu Rev Immunol* 27, 451-83.
- Kotenko, S.V. et al. (1995) *J Biol Chem* 270, 20915-21.
- McLaren, J.E. and Ramji, D.P. (2009) *Cytokine Growth Factor Rev* 20, 125-35.

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