# Human IFN-γ Antibody

Polyclonal Goat IgG

Catalog Number: AB-285-NA

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human IFN-γ in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant rhesus monkey IFN-γ is observed, and less than 5% cross-reactivity with recombinant mouse IFN-γ, recombinant canine IFN-γ, recombinant porcine IFN-γ, recombinant bovine IFN-γ, recombinant rat IFN-γ, recombinant feline IFN-γ, and recombinant equine IFN-γ is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Protein A or G purified |
| **Immunogen** | *E. coli*-derived recombinant human IFN-γ<br>Met1-Gln144<br>Accession # Q14609 |
| **Endotoxin Level** | <0.10 EU per 1 µg of the antibody by the LAL method. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. |

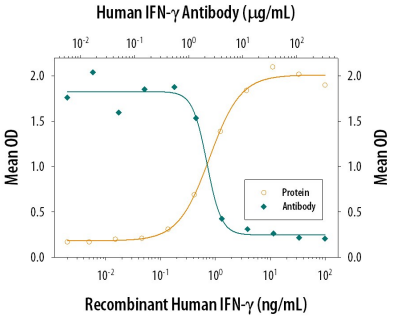
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 1 µg/mL | Recombinant Human IFN-γ (Catalog # 285-IF) |
| **Neutralization** | Measured by its ability to neutralize IFN-γ inhibition of EMCV-induced cytopathy in the HeLa human cervical epithelial carcinoma cell line [Meager, A. (1987) in Lymphokines and Interferons, a Practical Approach. Clemens, M.J. *et al.* (eds): IRL Press. 129]. The Neutralization Dose ($ND_{50}$) is typically 1-5 µg/mL in the presence of 5 ng/mL Recombinant Human IFN-γ. | |

## DATA

**Neutralization**




**IFN-γ Inhibition of EMCV-induced Cytopathy and Neutralization by Human IFN-γ Antibody.** Recombinant Human IFN-γ (Catalog # 285-IF) reduces the Encephalomyocarditis Virus (EMCV)-induced cytopathy in the HeLa human cervical epithelial carcinoma cell line in a dose-dependent manner (orange line), as measured by crystal violet staining. Inhibition of EMCV activity elicited by Recombinant Human IFN-γ (5 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IFN-γ Polyclonal Antibody (Catalog # AB-285-NA). The $ND_{50}$ is typically 1-5 µg/mL.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 1 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

Interferon-gamma (IFN-gamma, IFNG), also known as type II or Immune Interferon, exerts a wide range of immunoregulatory activities and is considered to be the prototype proinflammatory cytokine. Mature human IFN-gamma exists as a non-covalently linked homodimer of 20-25 kDa molecular weight variably glycosylated subunits. Glycosylation of IFN-gamma at sites Asn25 and Asn97 is critical for protease resistance. It shares 90% amino acid (aa) sequence identity with rhesus IFN-gamma, 59-64% with bovine, canine, equine, feline, and porcine IFN- gamma, and 37-43% with cotton rat, mouse, and rat IFN-gamma. IFN-gamma dimers bind to IFN-gamma RI (alpha subunits) which then interact with IFN-gamma RII (beta subunits) to form the functional receptor complex of two alpha and two beta subunits. Inclusion of IFN-gamma RII increases the binding affinity for ligand and the efficiency of signal transduction. IFN-gamma is produced by a variety of immune cells under inflammatory conditions, notably by T cells and NK cells. It plays a key function in host defense by promoting the development and activation of Th1 cells, chemoattraction and activation of monocytes and macrophages, up-regulation of antigen presentation molecules, and immunoglobulin class switching in B cells. It also exhibits antiviral, antiproliferative, and apoptotic effects. In addition, IFN-gamma functions as an anti-inflammatory mediator by promoting the development of regulatory T cells and inhibiting Th17 cell differentiation. The pleiotropic effects of IFN-gamma contribute to the development of multiple aspects of atherosclerosis.



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