

DESCRIPTION

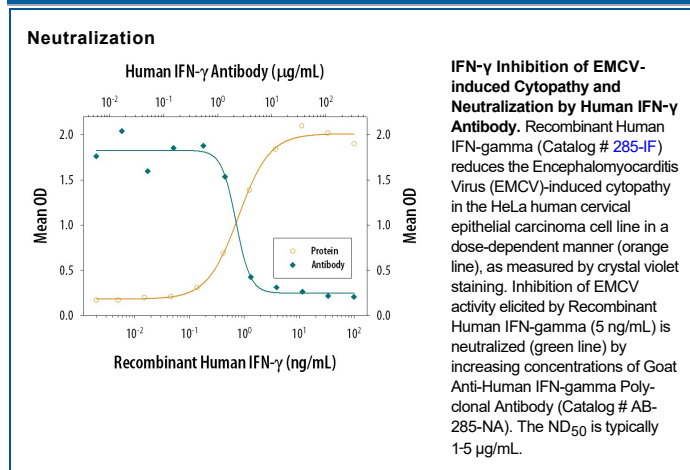
Species Reactivity	Human
Specificity	Detects human IFN-γ in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant rhesus monkey IFN-γ is observed, and less than 5% cross-reactivity with recombinant mouse IFN-γ, recombinant canine IFN-γ, 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	<i>E. coli</i> -derived recombinant human IFN-γ Met1-Gln144 Accession # P01579
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

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



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. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.