Human IFN-γ Antibody

Antigen Affinity-purified Polyclonal Goat IgG Catalog Number: AF-285-NA

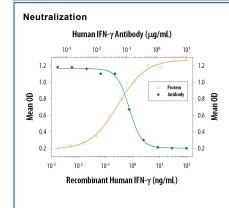
DESCRIPTION			
Species Reactivity	Human		
Specificity	Detects human IFNγ in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant rhesus macaque IFNγ is observed and less than 1% cross-reactivity with recombinant feline IFNγ, recombinant porcine IFNγ, recombinant canine IFNγ, recombinant rat IFNγ, recombinant mouse IFNγ, recombinant cotton rat IFNγ, recombinant bovine IFNγ, and recombinant equine IFNγ is observed.		
Source	Polyclonal Goat IgG		
Purification	Antigen Affinity-purified		
Immunogen	<i>E. coli</i> -derived recombinant human IFN-γ (R&D Systems, Catalog # 285-IF) Met1-Gln144 Accession # Q14609		
Endotoxin Level	<0.1 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

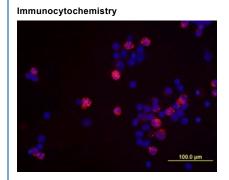
Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

Recommended Concentration	Sample
0.1 μg/mL	Recombinant Human IFN-γ (Catalog # 285-IF)
5-15 μg/mL	See Below
Measured by its ability to neutralize IFNγ 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. <i>et al.</i> (eds): IRL Press. 129. The Neutralization Dose (ND ₅₀) is typically 0.1-0.3 μg/mL in the presence of 5 ng/ml. Recombinant Human IFNγ.	
	Concentration 0.1 µg/mL 5-15 µg/mL Measured by its abil epithelial carcinoma M.J. et al. (eds): IRL

DATA



IFN-v Inhibition of EMCVinduced Cytopathy and Neutralization by Human IFN-γ Antibody. Recombinant Human IFN-y (Catalog # 285-IF) reduces the Encephalomyocarditis Virus (EMCV)-induced cytopathy in the HeLa human cervical epithelial carcinoma cell line in a dosedependent 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 Human IFN-γ Antigen Affinitypurified Polyclonal Antibody (Catalog # AF-285-NA). The ND_{50} is typically 0.1-0.3 $\mu g/mL.$



IFN-v in Human PBMCs. IFN-γ was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) stimulated with PMA and ionomycin using 10 $\mu g/mL$ Human IFN-v Antigen Affinitypurified Polyclonal Antibody (Catalog # AF-285-NA) for 3 hours at room temperature. Cells were stained with the NorthernLights $^{\text{TM}}$ 557conjugated Anti-Goat IqG Secondary Antibody (red: Catalog # NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells

PREPARATION AND STORAGE

 Reconstitution
 Reconstitute at 0.2 mg/mL in sterile PBS.

 Shipping
 The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month from date of receipt, 2 to 8 °C, reconstituted.
- 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

Interferon-gamma (IFN-y), 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-y exists as a non-covalently linked homodimer of 20-25 kDa variably glycosylated subunits. It shares 90% amino acid (aa) sequence identity with rhesus IFN-y, 59-64% with bovine, canine, equine, feline, and porcine IFN-y, and 37-43% with cotton rat, mouse, and rat IFN-y. IFN-y dimers bind to IFN-y RI (alpha subunits) which then interact with IFN-y RII (beta subunits) to form the functional receptor complex of two α and two β subunits. Inclusion of IFN-y RII increases the binding affinity for ligand and the efficiency of signal transduction. IFN-y is produced by a variety of immune cells under inflammatory conditions, notably by T cells and NK cells. It plays a key role in host defense by promoting the development and activation of Th1 cells, chemoattraction and activation of monocytes and macrophages, upregulation of antigen presentation molecules, and immunoglobulin class switching in B cells. It also exhibits antiviral, antiproliferative, and apoptotic effects. In addition, IFN-y functions as an anti-inflammatory mediator by promoting the development of regulatory T cells and inhibiting Th17 cell differentiation. The pleiotropic effects of IFN-y contribute to the development of multiple aspects of atherosclerosis.

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