

Anti- IFN Gamma Monoclonal Antibody

Catalog # ABO15027

Product Information

Application	IHC-P
Primary Accession	P01580
Host	Rat
Isotype	Rat IgG1, κ
Reactivity	Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti- IFN Gamma Monoclonal Antibody . Tested in IHC-P applications. This antibody reacts with Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500 μ g/ml.

Additional Information

Gene ID	15978
Other Names	Interferon gamma, IFN-gamma, Ifng
Calculated MW	17907
Application Details	Immunohistochemistry (Paraffin-embedded Section), 2-5 μ g/ml, Mouse
Source	Eukaryota
Protein Name	Interferon gamma
Contents	PBS, pH 7.0. Contains no stabilizers or preservatives
Clone Names	Clone: AFII-9
Immunogen	Recombinant mouse IFN γ
Purification	Immunogen affinity purified.
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

Name	Ifng
Function	Type II interferon produced by immune cells such as T-cells and NK cells that plays crucial roles in antimicrobial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation

(PubMed:[11585387](#), PubMed:[8456301](#)). Primarily signals through the JAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation. Upon IFNG binding, IFNGR1 intracellular domain opens out to allow association of downstream signaling components JAK2, JAK1 and STAT1, leading to STAT1 activation, nuclear translocation and transcription of IFNG-regulated genes. Many of the induced genes are transcription factors such as IRF1 that are able to further drive regulation of a next wave of transcription. Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits. In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading. Increases the efficiency of peptide generation also by inducing the expression of activator PA28 that associates with the proteasome and alters its proteolytic cleavage preference. Up-regulates as well MHC II complexes on the cell surface by promoting expression of several key molecules such as cathepsins B/CTSB, H/CTSH, and L/CTSL (By similarity). Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, quiescence, and differentiation (PubMed:[20535209](#), PubMed:[25078851](#)).

Cellular Location Secreted {ECO:0000250|UniProtKB:P01579}.

Tissue Location Released primarily from activated T lymphocytes.

Background

Interferon-gamma (IFN-gamma) is an inflammatory cytokine that has been implicated in the development of fibrosis in inflamed tissues. The production of IFN-gamma, which is under genetic control, can influence the development of fibrosis in lung allografts. IFN-gamma is also produced by natural killer (NK) cells and most prominently by CD8 cytotoxic T cells, and is vital for the control of microbial pathogens. Interferon gamma is believed to be crucial for host defence against many infections. Genetically determined variability in IFN-gamma and expression might be important for the development of tuberculosis. IFN-gamma activates human macrophage oxidative metabolism and antimicrobial activity. In addition to having antiviral activity, IFN-gamma has important immunoregulatory functions. IFN-gamma plays an important role in the control of neointima proliferation.

Images

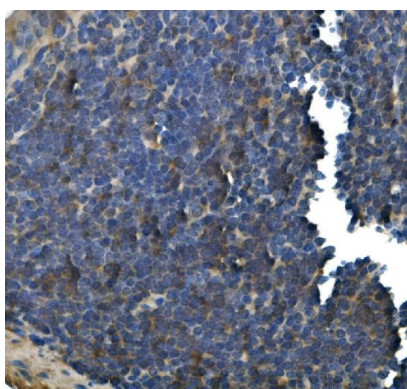


Figure 1. IHC analysis of IFN Gamma using anti-IFN Gamma antibody (M00393-5). IFN Gamma was detected in paraffin-embedded section of mouse lymphaden tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 µg/ml rat anti-IFN Gamma Antibody (M00393-5) overnight at 4°C. Biotinylated goat anti-rat IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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