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Anti- IFN Gamma Monoclonal Antibody

Catalog # ABO15027

Specification

Anti- IFN Gamma Monoclonal Antibody - 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 µg/ml.

Anti- IFN Gamma Monoclonal Antibody - Additional Information

Gene ID 15978

Other Names
Interferon gamma, IFN-gamma, Ifng

Application Details
Immunohistochemistry (Paraffin-embedded Section), 2-5 µg/ml, Mouse

Protein Name
Interferon gamma

Contents
PBS, pH 7.0. Contains no stabilizers or preservatives

Immunogen
Recombinant mouse IFNγ

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.**

Anti- IFN Gamma Monoclonal Antibody - 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.

Anti- IFN Gamma Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti- IFN Gamma Monoclonal Antibody - Images

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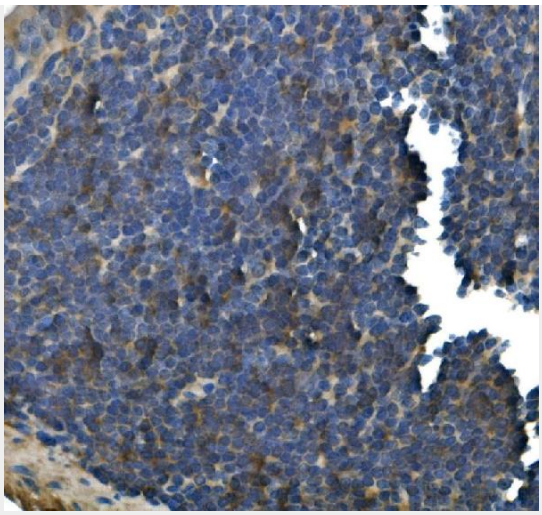

Figure 1. IHC analysis of IFN Gamma using anti-IFN Gamma antibody (M00393-5).
IFN Gamma was detected in paraffin-embedded section of mouse lymphaden tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Anti- IFN Gamma Monoclonal Antibody - 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.