

IFN-gamma Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1009a**Specification**

IFN-gamma Antibody - Product Information

Application	WB
Primary Accession	P01579
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	19.3kDa KDa

Description

Interferon- γ (IFN- γ) is a pro-inflammatory cytokine that is central in host resistance to infection. It is mainly produced by natural killer cells and CD4+ and CD8+ T cells, its receptors are found on nearly all cells, where it activates diverse responses that enable potential host cells to prevent invasive infection by bacteria, parasites and viruses. Takayanagi et al. (2000) demonstrated that IFN- γ strongly suppresses osteoclastogenesis by interfering with the RANKL (602642)-RANK (603499) signaling pathway. Tsubota et al. (1999) reported that this upregulation in Sjogren syndrome patients may be controlled by interferon-gamma through the activation of transcription factor NFkB

Immunogen

Purified recombinant fragment of human IFN- γ expressed in E. Coli.

Formulation

Purified antibody in PBS containing 0.03% sodium azide.

IFN-gamma Antibody - Additional Information

Gene ID 3458

Other Names

Interferon gamma, IFN-gamma, Immune interferon, IFNG

Dilution

WB~~1/500 - 1/2000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

IFN-gamma Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

IFN-gamma 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:16914093, PubMed:8666937). Primarily signals through the JAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation (PubMed:8349687). 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 (PubMed:16914093). Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits (PubMed:8666937). In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading (PubMed:8163024). 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 (PubMed:11112687). 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 (PubMed:7729559). Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, quiescence, and differentiation (By similarity).

Cellular Location

Secreted.

Tissue Location

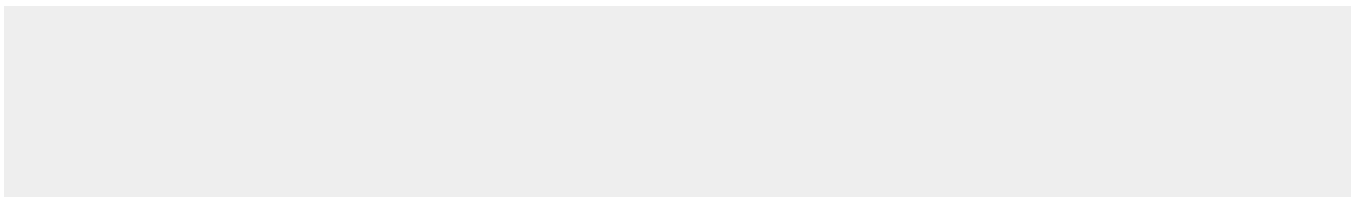
Released primarily from activated T lymphocytes.

IFN-gamma 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 Cytometry](#)
- [Cell Culture](#)

IFN-gamma Antibody - Images



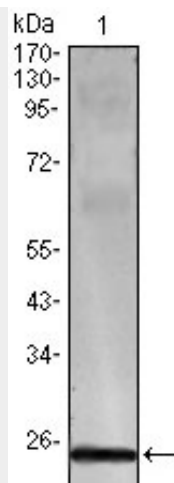


Figure 1: Western blot analysis using IFN gamma mouse mAb against truncated IFN-gamma recombinant protein.

IFN-gamma Antibody - References

1. Takayanagi, H. et al. Nature 2000. 408: 600-605.
2. Tsubota, K. et al. Invest. Ophthal. Vis. Sci. 40: 28-34, 1999.