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Interferon gamma (IFNG) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone G-23]
Catalog # AH11503

Product Information

Application	IF, FC
Primary Accession	P01579
Other Accession	3458, 856
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	G-23
Calculated MW	19348

Additional Information

Gene ID	3458
Other Names	Interferon gamma, IFN-gamma, Immune interferon, IFNG
Application Note	IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Interferon gamma (IFNG) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

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.

Background

Recognizes a protein of 20-25kDa, identified as human interferon. This MAb is specific to human IFN- and recognizes both recombinant and native human IFN-γ. It does not neutralize the activity of IFN-. T lymphocytes and NK cells mainly produce IFN-. It is a pleiotropic cytokine involved in the regulation of nearly all phases of immune and inflammatory responses, including the activation, growth and differentiation of T cell, B cells, macrophages, NK cells and other cell types such as endothelial cells and fibroblasts. It has weak anti-viral and anti-proliferative activity, and potentiates the antiviral and anti-tumor effects of IFN- (type I interferon).

References

Vilcek J. Forty years of interferon, forty years of cytokines. Cytokine Growth Factor Rev 1997,8(4):239 | Farrar MA and Schreiber RD. The molecular cell biology of interferon-gamma and its receptor. Annu Rev Immunol 1993, 11:571-611 | Vilcek J et al. Induction of human interferon gamma with phorbol esters and phytohemagglutinin. Methods Enzymol 1986,119:48-5