

Product datasheet for **AM03102PU-N**

Interferon gamma (IFNG) Mouse Monoclonal Antibody [Clone ID: G-23]

Product data:

Product Type:	Primary Antibodies
Clone Name:	G-23
Applications:	FC, WB
Recommended Dilution:	Flow Cytometry (2-4 µg/ml) Positive Control: PMA/ionomycin stimulated Peripheral Blood Lymphocytes (PBL) Application note: Intracellular staining Western Blotting (1 µg/ml) Positive control: recombinant human IFN-gamma.
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Recombinant human IFN-gamma (aa 22-166 representing mature IFN-gamma).
Specificity:	The antibody G-23 reacts with IFN-gamma, a 20-25 kDa cytokine produced by activated Th1 cells and NK cells.
Formulation:	Phosphate buffered saline (PBS), pH~7.4 containing 15 mM Sodium Azide as preservative. State: Aff - Purified State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE).
Concentration:	lot specific
Purification:	Affinity Chromatography on Protein A.
Conjugation:	Unconjugated
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: One year from despatch.
Gene Name:	interferon, gamma
Database Link:	Entrez Gene 3458 Human P01579



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Background:

The **Interferon gamma (IFN-gamma)**; 20-25 kDa) is an important regulator of the immune response, produced in activated Th1 cells and NK cells, particularly in response to IL-2, TNF-alpha and IL-12; its production is suppressed by IL-4, IL-10, and TGF-beta. The producing of IFN-gamma is activated by specific antigens or mitogens through the T cell antigen receptor. IFN-gamma polypeptide forms: 40-60 kDa forms are observable under non-denaturing conditions as dimers and trimers; 20 kDa and 25 kDa forms exist due to variable glycosylation. IFN-gamma belongs to the type II interferons, also called immune IFN. IFN-gamma shows antiviral activity and has important immunoregulatory functions. It is a potent activator of macrophages and had antiproliferative effects on transformed cells. IFN-gamma plays an important role in regulating B cell differentiation by simultaneously stimulating class switch recombination to the IgG3 and IgG2a isotypes while repressing class switch recombination to the IgE and IgG1 isotypes. It also appears to promote antigen presentation by B cells through its effects on MHC. Binding of IFN-gamma to its receptor increases the expression of class I MHC on all somatic cells. It also enhances the expression of class II MHC on antigen-presenting cells. IFN-gamma is the major means by which T cells activate macrophages, increasing their ability to kill bacteria, parasites, and tumours. The activation of macrophages by IFN-gamma is essential for the elimination of bacteria that replicate within the phagosomes of macrophages (f.e. Mycobacteria and Listeria monocytogenes). IFN-gamma can potentiate the high antiviral and antitumor effects of the type I interferons (IFN-alpha, IFN-beta). IFN-gamma may also activate neutrophils and NK cells.

Synonyms:

IFN-gamma, gamma IFN

Protein Families:

Druggable Genome, Secreted Protein

Protein Pathways:

Allograft rejection, Cytokine-cytokine receptor interaction, Graft-versus-host disease, Jak-STAT signaling pathway, Natural killer cell mediated cytotoxicity, Proteasome, Regulation of autophagy, Systemic lupus erythematosus, T cell receptor signaling pathway, TGF-beta signaling pathway, Type I diabetes mellitus