

Datasheet for ABIN1981857

**anti-Interferon gamma antibody (Biotin)**

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## Overview

Quantity:	0.1 mg
Target:	Interferon gamma (IFNG)
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Interferon gamma antibody is conjugated to Biotin
Application:	Western Blotting (WB), ELISA, Flow Cytometry (FACS), Immunoprecipitation (IP), Immunocytochemistry (ICC), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

## Product Details

Immunogen:	Interferon gamma derived from human leukocytes
Clone:	4S-B3
Isotype:	IgG1 kappa
Specificity:	The mouse monoclonal antibody 4S.B3 recognizes IFN-gamma, a 16-25 kDa cytokine produced by activated Th1 cells and NK cells. Binds both glycosylated and non-glycosylated protein.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified antibody is conjugated with biotin LC-NHS ester under optimum conditions and unconjugated antibody and free biotin are removed by size-exclusion chromatography.

## Target Details

Target:	Interferon gamma (IFNG)
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## Target Details

Alternative Name:	IFN-gamma ( <a href="#">IFNG Products</a> )
Background:	<p>Interferon gamma, The interferon gamma (IFN-gamma, 16-25 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., Interferon gamma, IFN-gamma</p>
Gene ID:	3458
UniProt:	<a href="#">P01579</a>
Pathways:	<a href="#">Interferon-gamma Pathway</a> , <a href="#">Cellular Response to Molecule of Bacterial Origin</a> , <a href="#">Regulation of Leukocyte Mediated Immunity</a> , <a href="#">Positive Regulation of Immune Effector Process</a> , <a href="#">Production of Molecular Mediator of Immune Response</a> , <a href="#">ER-Nucleus Signaling</a> , <a href="#">Regulation of Carbohydrate Metabolic Process</a> , <a href="#">Protein targeting to Nucleus</a> , <a href="#">Autophagy</a>

## Application Details

Application Notes:	<p>Flow cytometry: Recommended dilution 1-4 µg/mL. Intracellular staining.</p> <p>ELISA: Detection antibody in combination with capture antibody NIB42.</p>
Comment:	<p>The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.</p>

## Application Details

Restrictions: For Research Use only

## Handling

Concentration: 1 mg/mL

Buffer: Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide

Preservative: Sodium azide

Precaution of Use: This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling Advice: Do not freeze. Do not use after expiration date stamped on vial label.

Storage: 4 °C

Storage Comment: Store at 2-8°C. Do not freeze.

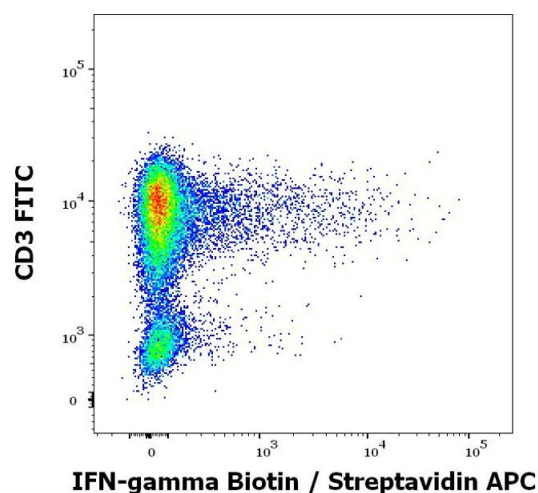
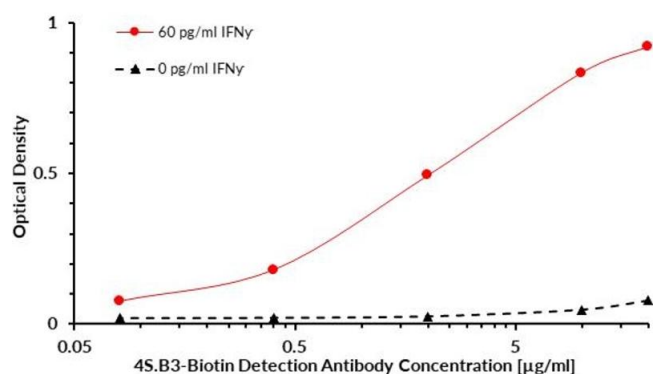
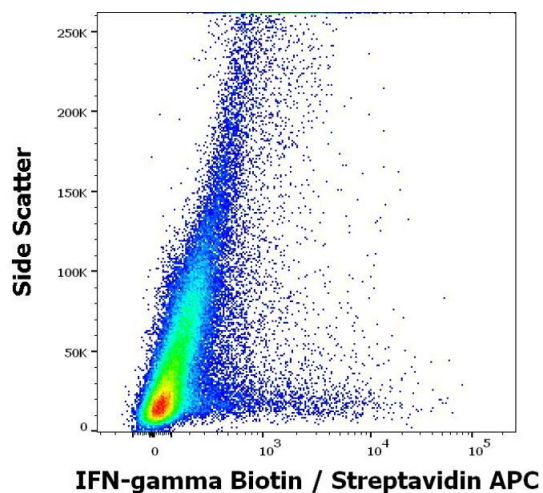
## Publications

Product cited in: Brincks, Kucaba, Legge, Griffith: "Influenza-induced expression of functional tumor necrosis factor-related apoptosis-inducing ligand on human peripheral blood mononuclear cells." in: **Human immunology**, Vol. 69, Issue 10, pp. 634-46, (2008) ([PubMed](#)).

Janke, Witsch, Mages, Hutloff, Krocze: "Eminent role of ICOS costimulation for T cells interacting with plasmacytoid dendritic cells." in: **Immunology**, Vol. 118, Issue 3, pp. 353-60, (2006) ([PubMed](#)).

Coles, Wing, Smith, Coraddu, Greer, Taylor, Weetman, Hale, Chatterjee, Waldmann, Compston: "Pulsed monoclonal antibody treatment and autoimmune thyroid disease in multiple sclerosis." in: **Lancet (London, England)**, Vol. 354, Issue 9191, pp. 1691-5, (1999) ([PubMed](#)).

Caulfield, Fernandez, Sousa, Lane, Lee, Hawrylowicz: "Regulation of major histocompatibility complex class II antigens on human alveolar macrophages by granulocyte-macrophage colony-stimulating factor in the presence of glucocorticoids." in: **Immunology**, Vol. 98, Issue 1, pp. 104-10, (1999) ([PubMed](#)).



### Flow Cytometry

**Image 1.** Flow cytometry intracellular staining pattern of human peripheral whole blood (PHA stimulated and Brefeldin A + Monesin treated) stained using anti-human IFN-gamma (4S.B3) biotin antibody (concentration in sample 1,7 µg/mL, Streptavidin APC).

### ELISA

**Image 2.** Cytokine IFN gamma (IFN $\gamma$ ) sandwich ELISA (enzyme-linked immunosorbent assay) that utilizes antibody clone NIB42 as the protein capture antibody and antibody clone 4S.B3-Biotin as the detection antibody. Recombinant IFN $\gamma$  was captured by NIB42 and detected by variable amounts of 4S.B3-Biotin. The 4S.B3-Biotin conjugate was visualized by Streptavidin-HRP and substrate solution (TMB). The intensity of the signal is proportional to the amount of cytokine and to the amount of the detection antibody.

### Flow Cytometry

**Image 3.** Flow cytometry multicolor intracellular staining pattern of human lymphocytes (PHA stimulated and Brefeldin A + Monesin treated) stained using anti-human IFN-gamma (4S.B3) biotin antibody (concentration in sample 1,7 µg/mL, Streptavidin APC) and anti-human CD3 (UCHT1) FITC antibody (20 µL reagent / 100 µL of peripheral whole blood).

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN1981857.