TECHNICAL DATA SHEET

CyFlow™ IFN-gamma FITC
Anti-Hu; Clone 4S.B3

REF **AE092283**

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	IFN-γ
Alternative Names	—
Clone	4S.B3
Clonality	monoclonal
Format	FITC
Host / Isotype	Mouse / IgG1
Species Reactivity	Human, Non-Human Primates
Negative Species Reactivity	—
Quantity	100 tests
Immunogen	Interferon gamma derived from human leukocytes

Specificity

The mouse monoclonal antibody 4S.B3 recognizes IFN-γ antigen, a 16-25 kDa cytokine produced by activated Th1 cells and NK cells. Binds both glycosylated and non-glycosylated protein.

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Application

The reagent is designed for Flow Cytometry analysis of human blood cells. Recommended usage is 4 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension. The content of a vial (0.4 ml) is sufficient for 100 tests.

Other usages may be determined from the scientific literature.

Storage Buffer

The reagent is provided in stabilizing phosphate buffered saline (PBS) solution, pH ≈7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

The Interferon γ (IFN-γ) is an important regulator of the immune response, produced in activated Th1 cells and NK cells, particularly in response to IL-2, TNF-α and IL-12; its production is suppressed by IL-4, IL-10, and TGF-β. The production of IFN-γ is activated by specific antigens or mitogens through the T cell antigen receptor. IFN-γ 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-γ belongs to the type II interferons, also called immune IFN. IFN-γ shows antiviral activity and has important immunoregulatory functions. It is a potent activator of macrophages and had antiproliferative effects on transformed cells. IFN-γ plays an important role in regulating B cell differentiation by simultaneously stimulating class switch recombination to the IgG3 and IgG2a isotypes while represing 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-γ 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-γ is the major means by which T cells activate macrophages, increasing their ability to kill bacteria, parasites, and tumors. The activation of macrophages by IFN-γ is essential for the elimination of bacteria that replicate within the phagosomes of macrophages (f.e. Mycobacteria and Listeria monocytogenes). IFN-γ can potentiate the high antiviral and antitumor effects of the type I interferons (IFN-α, IFN-β). IFN-γ may also activate neutrophils and NK cells.

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The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

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