Mouse IFN-γ Alexa Fluor® 700-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 37895

Catalog Number: IC485N

100 Tests, 25 Tests

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IFN-γ in Western blots. In Western blots, this antibody does not cross-react with recombinant human IFN-γ, recombinant rat IFN-γ, recombinant porcine IFN-γ, recombinant rhesus macaque IFN-γ, recombinant feline IFN-γ, or recombinant canine IFN-γ.
Source	Monoclonal Rat IgG_{2A} Clone # 37895
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse IFN-γ
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

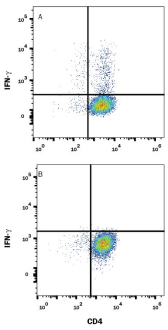
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of IFN-γ in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes either (A) stimulated to induce Th1 cells or (B) unstimulated were stained with Rat Anti-Mouse IFN-γ Alexa Fluor® 700-conjugated Monoclonal Antibody (Catalog # IC485N) and Rat Anti-Mouse CD4 PE-conjugated Monoclonal Antibody (Catalog # FAB554P). Quadrant markers were set based on control antibody staining (Catalog # IC006N). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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BACKGROUND

Interferon-gamma (IFN-γ), also known as type II or Immune Interferon, exerts a wide range of immunoregulatory activities and is considered to be the prototype pro-inflammatory cytokine (1, 2). Mature mouse IFN-γ exists as a noncovalently linked homodimer of 20-25 kDa variably glycosylated subunits (3). It shares 86% amino acid sequence identity with rat IFN-γ and 38-44% with bovine, canine, cotton rat, equine, feline, human, porcine, and rhesus macaque IFN-γ. IFN-γ dimers bind to IFN-γ RI (alpha subunits) which then interact with IFN-γ RII (beta subunits) to form the functional receptor complex of two α and two β subunits. Inclusion of IFN-γ RII increases the binding affinity for ligand and the efficiency of signal transduction (4, 5). IFN-γ is produced by a variety of immune cells under inflammatory conditions, notably by T cells and NK cells (6). It plays a key role in host defense by promoting the development and activation of Th1 cells, chemoattraction and activation of monocytes and macrophages, upregulation of antigen presentation molecules, and immunoglobulin class switching in B cells. It also exhibits anti-viral, anti-proliferative, and apoptotic effects (6, 7). In addition, IFN-γ functions as an anti-inflammatory mediator by promoting the development of regulatory T cells and inhibiting Th17 cell differentiation (8, 9). The pleiotropic effects of IFN-γ contribute to the development of multiple aspects of atherosclerosis (7).

References:

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PRODUCT SPECIFIC NOTICES

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