

# IFN- $\gamma$ (G-23): sc-8423

## BACKGROUND

Interferon (IFN)- $\gamma$  is an antiviral and antiparasitic agent produced by CD4<sup>+</sup>/CD8<sup>+</sup> lymphocytes and natural killer cells that undergo activation by antigens, mitogens or alloantigens. IFN- $\gamma$  production modulates T cell growth and differentiation and inhibits the growth of B cells. Synthesis of IFN- $\gamma$  is inducible by IL-2, FGF and EGF. The active form of IFN- $\gamma$  is a homodimer with each subunit containing six helices. The dimeric structure of human IFN- $\gamma$  is stabilized by non-covalent interactions through the interface of the helices. IFN- $\gamma$  translated precursor is 166 amino acids, including the 23 amino acid secretory sequence. Multiple forms exist due to variable glycosylation and under non-denaturing conditions due to dimers and tetramers.

## CHROMOSOMAL LOCATION

Genetic locus: IFNG (human) mapping to 12q15.

## SOURCE

IFN- $\gamma$  (G-23) is a mouse monoclonal antibody raised against amino acids 22-166 representing mature IFN- $\gamma$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFN- $\gamma$  (G-23) is available conjugated to agarose (sc-8423 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-8423 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-8423 PE), fluorescein (sc-8423 FITC), Alexa Fluor<sup>®</sup> 488 (sc-8423 AF488), Alexa Fluor<sup>®</sup> 546 (sc-8423 AF546), Alexa Fluor<sup>®</sup> 594 (sc-8423 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-8423 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-8423 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-8423 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

IFN- $\gamma$  (G-23) is recommended for detection of precursor and mature IFN- $\gamma$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFN- $\gamma$  siRNA (h): sc-39606, IFN- $\gamma$  shRNA Plasmid (h): sc-39606-SH and IFN- $\gamma$  shRNA (h) Lentiviral Particles: sc-39606-V.

Molecular Weight of IFN- $\gamma$ : 20-25 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or Daudi cell lysate: sc-2415.

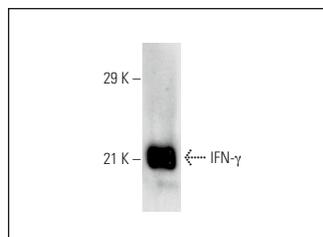
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

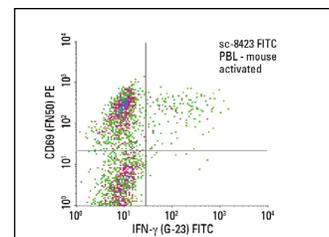
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



IFN- $\gamma$  (G-23): sc-8423. Western blot analysis of human recombinant IFN- $\gamma$ .



IFN- $\gamma$  (G-23) FITC: sc-8423 FITC. FCM analysis of PMA/ionomycin stimulated human PBL cells, stained with CD69 (F50) PE: sc-18880 PE. Cells were fixed and permeabilized, then stained with IFN- $\gamma$  (G-23) FITC: sc-8423 FITC. Quadrant markers were set based on the isotype controls, normal mouse IgG<sub>1</sub>: sc-2855 and sc-2866.

## SELECT PRODUCT CITATIONS

- Li, L., et al. 2005. Cellular immune suppressor activity resides in lymphocyte cell clusters adjacent to granulomata in human coccidioidomycosis. *Infect. Immun.* 73: 3923-3928.
- Kong, L.J., et al. 2006. The Rb-related p130 protein controls telomere lengthening through an interaction with a Rad50-interacting protein, RINT-1. *Mol. Cell* 22: 63-71.
- Karaoz, E. 2009. Pancreatic islet-derived stem cells may have a key role in type 1 diabetes pathogenesis. *Cell Tissue Biol. Res.* 2: 8-22.
- Xu, M., et al. 2015. Cloning and characterization of the human Integrin  $\gamma$ 6 gene promoter. *PLoS ONE* 10: e0121439.
- Liu, J., et al. 2015. Tumor-targeting novel manganese complex induces Ros-mediated apoptotic and autophagic cancer cell death. *Int. J. Mol. Med.* 35: 607-616.
- Subramanian, S., et al. 2017. TREM-1 associated macrophage polarization plays a significant role in inducing Insulin resistance in obese population. *J. Transl. Med.* 15: 85.
- Liang, W., et al. 2021. Sacubitril/Valsartan alleviates experimental autoimmune myocarditis by inhibiting Th17 cell differentiation independently of the NLRP3 inflammasome pathway. *Front. Pharmacol.* 12: 727838.
- Li, L., et al. 2022. ZBTB28 inhibits breast cancer by activating IFNAR and dual blocking CD24 and CD47 to enhance macrophages phagocytosis. *Cell. Mol. Life Sci.* 79: 83.
- Yu, D., et al. 2023. PM2.5 exposure increases dry eye disease risks through corneal epithelial inflammation and mitochondrial dysfunctions. *Cell Biol. Toxicol.* 39: 2615-2630.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.