

IFN- γ (G-30): sc-57208

BACKGROUND

Interferon (IFN)- γ is an antiviral and antiparasitic agent produced by CD4⁺/CD8⁺ lymphocytes and natural killer cells that undergo activation by antigens, mitogens or alloantigens. IFN- γ production modulates T cell growth and differentiation and inhibits the growth of B cells. Synthesis of IFN- γ is inducible by IL-2, FGF and EGF. The active form of IFN- γ is a homodimer with each subunit containing six helices. The dimeric structure of human IFN- γ is stabilized by non-covalent interactions through the interface of the helices. IFN- γ 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.

REFERENCES

- Young, H.A., et al. 1995. Role of IFN- γ in immune cell regulation. *J. Leukoc. Biol.* 58: 373-381.
- Dinarelli, C.A., et al. 1998. Overview of interleukin-18: more than an IFN- γ inducing factor. *J. Leukoc. Biol.* 63: 658-664.
- Okamura, H., et al. 1998. Regulation of IFN- γ production by IL-12 and IL-18. *Curr. Opin. Immunol.* 10: 259-264.
- Costa-Pereira, A.P., et al. 2002. The antiviral response to IFN- γ . *J. Virol.* 76: 9060-9068.
- Zika, E., et al. 2003. Histone deacetylase 1/mSin3A disrupts IFN- γ -induced CIITA function and major histocompatibility complex class II enhanceosome formation. *Mol. Cell. Biol.* 23: 3091-3102.
- Schroder, K., et al. 2004. IFN- γ : an overview of signals, mechanisms and functions. *J. Leukoc. Biol.* 75: 163-189.
- Ellis, T.N., et al. 2004. IFN- γ activation of polymorphonuclear neutrophil function. *Immunology* 112: 2-12.

CHROMOSOMAL LOCATION

Genetic locus: IFNG (human) mapping to 12q15; Ifng (mouse) mapping to 10 D2.

SOURCE

IFN- γ (G-30) is a mouse monoclonal antibody raised against recombinant IFN- γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFN- γ (G-30) is available conjugated to agarose (sc-57208 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57208 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57208 PE), fluorescein (sc-57208 FITC), Alexa Fluor[®] 488 (sc-57208 AF488), Alexa Fluor[®] 546 (sc-57208 AF546), Alexa Fluor[®] 594 (sc-57208 AF594) or Alexa Fluor[®] 647 (sc-57208 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-57208 AF680) or Alexa Fluor[®] 790 (sc-57208 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

IFN- γ (G-30) is recommended for detection of IFN- γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for IFN- γ siRNA (h): sc-39606, IFN- γ siRNA (m): sc-39607, IFN- γ shRNA Plasmid (h): sc-39606-SH, IFN- γ shRNA Plasmid (m): sc-39607-SH, IFN- γ shRNA (h) Lentiviral Particles: sc-39606-V and IFN- γ shRNA (m) Lentiviral Particles: sc-39607-V.

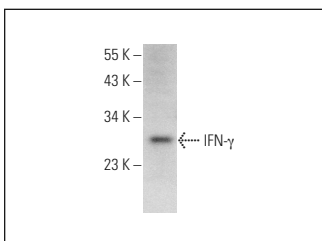
Molecular Weight of IFN- γ : 20-25 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or F9 cell lysate: sc-2245.

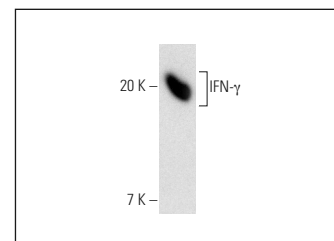
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



IFN- γ (G-30): sc-57208. Western blot analysis of IFN- γ expression in F9 whole cell lysate.



IFN- γ (G-30): sc-57208. Western blot analysis of human recombinant IFN- γ .

SELECT PRODUCT CITATIONS

- Rojas-Dotor, S., et al. 2018. The monocyte locomotion inhibitory factor inhibits the expression of inflammation-induced cytokines following experimental contusion in rat tibia. *Scand. J. Immunol.* 88: e12702.
- Peter, J., et al. 2020. Dietary amaranths modulate the immune response via balancing Th1/Th2 and Th17/treg response in collagen-induced arthritis. *Mol. Cell. Biochem.* E-published.

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.