

# IFN- $\gamma$ (G-30): sc-57208

## 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.

## REFERENCES

1. Young, H.A., et al. 1995. Role of IFN- $\gamma$  in immune cell regulation. *J. Leukoc. Biol.* 58: 373-381.
2. Dinarello, C.A., et al. 1998. Overview of interleukin-18: more than an IFN- $\gamma$  inducing factor. *J. Leukoc. Biol.* 63: 658-664.

## CHROMOSOMAL LOCATION

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

## SOURCE

IFN- $\gamma$  (G-30) is a mouse monoclonal antibody raised against recombinant 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-30) is available conjugated to agarose (sc-57208 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-57208 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-57208 PE), fluorescein (sc-57208 FITC), Alexa Fluor<sup>®</sup> 488 (sc-57208 AF488), Alexa Fluor<sup>®</sup> 546 (sc-57208 AF546), Alexa Fluor<sup>®</sup> 594 (sc-57208 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-57208 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-57208 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-57208 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

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

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

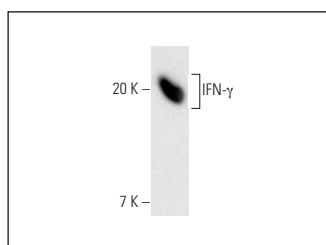
Molecular Weight of IFN- $\gamma$ : 20-25 kDa.

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

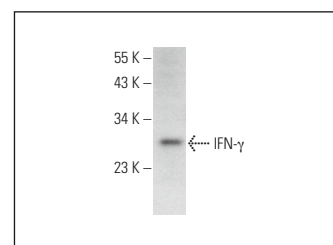
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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- $\gamma$  (G-30): sc-57208. Western blot analysis of human recombinant IFN- $\gamma$ .



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

## SELECT PRODUCT CITATIONS

1. 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.
2. 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.* 472: 57-66.
3. He, Q., et al. 2021. MBP-activated autoimmunity plays a role in arsenic-induced peripheral neuropathy and the potential protective effect of mecobalamin. *Environ. Toxicol.* 36: 1243-1253.
4. Bhattarai, G., et al. 2022. Astaxanthin protects against hyperglycemia-induced oxidative and inflammatory damage to bone marrow and to bone marrow-retained stem cells and restores normal hematopoiesis in streptozotocin-induced diabetic mice. *Antioxidants* 11: 2321.

## RESEARCH USE

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

## PROTOCOLS

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

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