

# IFN- $\gamma$ (B27): sc-52556

## 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. 20 kDa and 25 kDa forms exist due to variable glycosylation; 40-60 kDa forms are observable under non-denaturing conditions as dimers and tetramers.

## REFERENCES

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2. Dinarello, C.A., et al. 1998. Overview of interleukin-18: more than an IFN- $\gamma$  inducing factor. *J. Leukoc. Biol.* 63: 658-664.
3. Okamura, H., et al. 1998. Regulation of IFN- $\gamma$  production by IL-12 and IL-18. *Curr. Opin. Immunol.* 10: 259-264.
4. Costa-Pereira, A.P., et al. 2002. The antiviral response to IFN- $\gamma$ . *J. Virol.* 76: 9060-9068.
5. Zika, E., et al. 2003. Histone deacetylase 1/mSin3A disrupts IFN- $\gamma$ -induced CIITA function and major histocompatibility complex class II enhancosome formation. *Mol. Cell. Biol.* 23: 3091-3102.
6. Schroder, K., et al. 2004. IFN- $\gamma$ : an overview of signals, mechanisms and functions. *J. Leukoc. Biol.* 75: 163-189.
7. Ellis, T.N., et al. 2004. IFN- $\gamma$  activation of polymorphonuclear neutrophil function. *Immunology* 112: 2-12.
8. Sizemore, N., et al. 2004. Inhibitor of  $\kappa$ B kinase is required to activate a subset of IFN- $\gamma$ -stimulated genes. *Proc. Natl. Acad. Sci. USA* 101: 7994-7998.
9. Halfter, U.M., et al. 2005. IFN- $\gamma$ -dependent tyrosine phosphorylation of MEKK4 via Pyk2 is regulated by annexin II and SHP2 in keratinocytes. *Biochem. J.* 388: 17-28.

## CHROMOSOMAL LOCATION

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

## SOURCE

IFN- $\gamma$  (B27) is a mouse monoclonal antibody raised against human IFN- $\gamma$ .

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IFN- $\gamma$  (B27) is available conjugated fluorescein (sc-52556 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

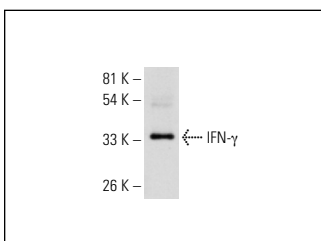
## APPLICATIONS

IFN- $\gamma$  (B27) is recommended for detection of 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) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

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.

## DATA



IFN- $\gamma$  (B27): sc-52556. Western blot analysis of human recombinant IFN- $\gamma$ .

## 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.

## PROTOCOLS

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



See **IFN- $\gamma$  (E-10): sc-373727** for IFN- $\gamma$  antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647.