

# IFN- $\gamma$ (H22.1): sc-12743

## 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.
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 enhanceosome 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 kappaB 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 (mouse) mapping to 10 D2.

## SOURCE

IFN- $\gamma$  (H22.1) is a Armenian hamster monoclonal antibody raised against purified recombinant mouse IFN- $\gamma$ .

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for neutralization, sc-12743 L, 200  $\mu$ g/0.1 ml.

## APPLICATIONS

IFN- $\gamma$  (H22.1) is recommended for detection of precursor and mature IFN- $\gamma$  of mouse origin by functional assay.

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

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

## 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.