



IFN- γ (R4-6A2): sc-53700

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

1. Young, H.A., et al. 1995. Role of IFN- γ 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- γ inducing factor. J. Leukoc. Biol. 63: 658-664.
3. Okamura, H., et al. 1998. Regulation of IFN- γ 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- γ . J. Virol. 76: 9060-9068.
5. 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.
6. Schroder, K., et al. 2004. IFN- γ : an overview of signals, mechanisms and functions. J. Leukoc. Biol. 75: 163-189.
7. Ellis, T.N., et al. 2004. IFN- γ activation of polymorphonuclear neutrophil function. Immunology 112: 2-12.
8. Sizemore, N., et al. 2004. Inhibitor of κ B kinase is required to activate a subset of IFN- γ -stimulated genes. Proc. Natl. Acad. Sci. USA 101: 7994-7998.
9. Halfter, U.M., et al. 2005. IFN- γ -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- γ (R4-6A2) is a rat monoclonal antibody raised against partially-purified native IFN- γ of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

IFN- γ (R4-6A2) is recommended for detection of IFN- γ of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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

Molecular Weight of IFN- γ : 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.