SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-γ (MD-1.2): sc-59994



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 nondenaturing 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.
- Dinarello, 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.
- 4. 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.
- 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.
- 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.

SOURCE

 $\mathsf{IFN}\text{-}\gamma$ (MD-1.2) is a mouse monoclonal antibody raised against $\mathsf{IFN}\text{-}\gamma$ of monkey origin.

PRODUCT

Each vial contains 100 μg lgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IFN- γ (MD-1.2) is recommended for detection of IFN- γ of monkey origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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

RESEARCH USE

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

PROTOCOLS

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