

IFN- γ (165): sc-52811

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

- Young, H.A., et al. 1995. Role of IFN- γ in immune cell regulation. *J. Leukoc. Biol.* 58: 373-381.
- Dinarelli, 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.
- 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.
- Ellis, T.N., et al. 2004. IFN- γ activation of polymorphonuclear neutrophil function. *Immunology* 112: 2-12.
- 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.

CHROMOSOMAL LOCATION

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

SOURCE

IFN- γ (165) is a mouse monoclonal antibody raised against recombinant interferon- γ of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain 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 (165) is recommended for detection of IFN- γ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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

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

Positive Controls: Jurkat whole cell lysate: sc-2204, Daudi cell lysate: sc-2415 or CCRF-CEM cell lysate: sc-2225.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

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.



See **IFN- γ (E-10): sc-373727** for IFN- γ antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.