## SANTA CRUZ BIOTECHNOLOGY, INC.

# IFN-γ (MD-1.1): sc-57212



# BACKGROUND

Interferon (IFN)-y is an antiviral and antiparasitic agent produced by CD4+/ CD8+ lymphocytes and natural killer cells that undergo activation by antigens, mitogens or alloantigens. IFN-y production modulates T cell growth and differentiation and inhibits the growth of B cells. Synthesis of IFN-y is inducible by IL-2, FGF and EGF. The active form of IFN-y 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-y 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

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- 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-y. 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.
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- 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 KB kinase is required to activate a subset of IFN-y-stimulated genes. Proc. Natl. Acad. Sci. USA 101: 7994-7998.
- 9. Halfter, U.M., et al. 2005. IFN-y-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 12q14.

#### SOURCE

IFN-y (MD-1.1) is a mouse monoclonal antibody raised against full length IFN-γ of human origin.

#### PRODUCT

Each vial contains 100  $\mu$ g lgG<sub>1</sub> 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 (MD-1.1) is recommended for detection of IFN-γ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with IFN- $\alpha$  or  $\beta$ .

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

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

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

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