IFN-γ (H-145): sc-8308

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BIOTECHNOLOGY

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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 tranlsated 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. Okamura, H., et al. 1998. Regulation of IFN-γ production by IL-12 and IL-18. Curr. Opin. Immunol. 10: 259-264.

3. Dinarello, C.A., et al. 1998. Overview of interleukin-18: more than an IFN-γ inducing factor. J. Leukoc. Biol. 63: 658-664.

CHROMOSOMAL LOCATION

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

SOURCE

IFN-γ (H-145) is a rabbit polyclonal antibody raised against amino acids 22-166 of IFN-γ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IFN-γ (H-145) is recommended for detection of precursor and mature IFN-γ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

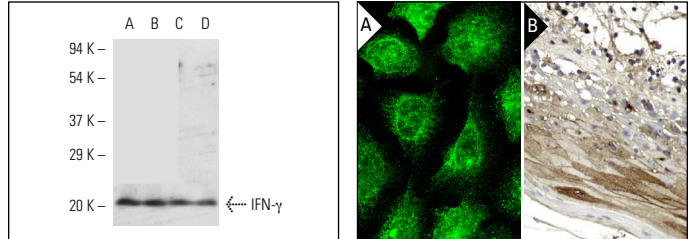Positive Controls: Jurkat whole cell lysate: sc-2204, CCRF-CEM cell lysate: sc-2225 or Daudi cell lysate: sc-2415.

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.

DATA

IFN-γ (H-145): sc-8308. Western blot analysis of IFN-γ expression in Jurkat (**A**), CCRF-CEM (**B**), AML-193 (**C**) and Daudi (**D**) whole cell lysates.

IFN-γ (H-145): sc-8308. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of surface epithelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Souto, J., et al. 1999. Interferon-γ and tumor necrosis factor-α determine resistance to paracoccidioides brasiliensis infection in mice. Am. J. Pathol. 155: 1811-1820.

2. Vieira, R.P., et al. 2008. Aerobic conditioning and allergic pulmonary inflammation in mice. II. Effects on lung vascular and parenchymal inflammation and remodeling. Am. J. Physiol. Lung Cell. Mol. Physiol. 295: L670-L679.

3. Shamji, M.F., et al. 2010. Proinflammatory cytokine expression profile in degenerated and herniated human intervertebral disc tissues. Arthritis Rheum. 62: 1974-1982.

4. Domingos, P.L., et al. 2012. OX40+ T lymphocytes and IFN-γ are associated with American tegumentary leishmaniasis pathogenesis. An. Bras. Dermatol. 87: 851-855.

5. Silva, A.C., et al. 2012. Exercise inhibits allergic lung inflammation. Int. J. Sports Med. 33: 402-409.

6. Galvão, A., et al. 2012. Cytokines tumor necrosis factor-α and interferon-γ participate in modulation of the equine corpus luteum as autocrine and paracrine factors. J. Reprod. Immunol. 93: 28-37.

7. Quartuccio, L., et al. 2012. Role of oral cyclophosphamide in the treatment of giant cell arteritis. Rheumatology 51: 1677-1686.

8. Davoodi-Semiromi, A., et al. 2012. The tyrphostin agent AG490 prevents and reverses type 1 diabetes in NOD mice. PLoS ONE 7: e36079.

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Try **IFN-γ (E-10): sc-373727** or **IFN-γ (3F1E3): sc-32813**, our highly recommended monoclonal alternatives to IFN-γ (H-145). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **IFN-γ (E-10): sc-373727**.