SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-γ (FF6): sc-74104

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. and Hardy, K.J. 1995. Role of interferon-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 interferon-γ inducing factor. J. Leukoc. Biol. 63: 658-664.
3. Okamura, H., et al. 1998. Regulation of interferon-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 γ interferon. J. Virol. 76: 9060-9068.
5. Zika, E., et al. 2003. Histone deacetylase 1/mSin3A disrupts γ interferon-induced CIITA function and major histocompatibility complex class II enhanceosome formation. Mol. Cell. Biol. 23: 3091-3102.
6. Schroder, K., et al. 2004. Interferon-γ: an overview of signals, mechanisms and functions. J. Leukoc. Biol. 75: 163-189.

CHROMOSOMAL LOCATION

Genetic locus: Ifng (mouse) mapping to 10 D2.

SOURCE

IFN-γ (FF6) is a rat monoclonal antibody raised against full length recombinant IFN-γ of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer. Also available azide-free for neutralization, sc-74104 L, 100 µg/0.1 ml.

APPLICATIONS

IFN-γ (FF6) is recommended for detection of IFN-γ of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

SELECT PRODUCT CITATIONS

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2. Bang, M.A., et al. 2015. *Bacillus subtilis* KCTC 11782BP-produced alginate oligosaccharide effectively suppresses asthma via T-helper cell type 2-related cytokines. PLoS ONE 10: e0117524.
3. Seo, J.H., et al. 2016. *Erythronium japonicum* attenuates histopathological lung abnormalities in a mouse model of ovalbumin-induced asthma. Int. J. Mol. Med. 37: 1221-1228.
4. Kim, J.E., et al. 2017. Anti-inflammatory effect of *Allium hookeri* on carrageenan-induced air pouch mouse model. PLoS ONE 12: e0190305.
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9. Bok, S.H., et al. 2019. *Allium hookeri* root extract regulates asthmatic changes through immunological modulation of Th1/Th2-related factors in an ovalbumin-induced asthma mouse model. Mol. Med. Rep. 20: 3215-3223.
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11. Lee, S.Y., et al. 2020. Anti-inflammatory effect of *Curcuma longa* and *Allium hookeri* co-treatment via NFκB and Cox-2 pathways. Sci. Rep. 10: 5718.
12. Fan, X., et al. 2021. Blockage of P2X7R suppresses Th1/Th17-mediated immune responses and corneal allograft rejection via inhibiting NLRP3 inflammasome activation. Exp. Eye Res. 212: 108792.

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.