SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-β (MIB-3F7.3): sc-53593

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN-α genes, one IFN-β gene, one IFN-ω (also known as IFN-α II1) gene and a number of IFN-ω pseudogenes, are clustered on human chromosome 9. IFN-α and -β are cytokines that are widely known to induce potent antiviral activity. They exert a variety of other biological effects, including antitumor and immunomodulatory activities, and are increasingly used clinically to treat a range of malignancies, myelodysplasias and autoimmune diseases. IFN-ω is antigenically different from human IFN-α, IFN-β or IFN-γ, but is a component of natural mixtures of IFN species produced by virus-induced leukocytes or Burkitt's lymphoma cells. The type I interferon receptor (IFN-αR) interacts with IFN-α, IFN-β and IFN-ω, and seems to be a multisubunit receptor.

REFERENCES

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2. Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine α-interferon receptors. FEBS Lett. 350: 281-286.
3. Hussain, M., et al. 1996. Identification of interferon-α 7, -α 14, and -α 21 variants in the genome of a large human population. J. Interferon Cytokine Res. 16: 853-859.
4. Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons -α, -β and -ω. J. Immunol. Methods 195: 55-61.
5. Cutrone, E.C., et al. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. FEBS Lett. 404: 197-202.
6. Vannucchi, S., et al. 2005. TRAIL is a key target in S-phase slowing-dependent apoptosis induced by interferon-β in cervical carcinoma cells. Oncogene 24: 2536-2546.
7. Siren, J., et al. 2005. IFN-α regulates TLR-dependent gene expression of IFN-α, IFN-β, IL-28, and IL-29. J. Immunol. 174: 1932-1937.
8. Molnarfi, N., et al. 2005. The production of IL-1 receptor antagonist in IFN-β-stimulated human monocytes depends on the activation of phosphatidylinositol 3-kinase but not of Stat1. J. Immunol. 174: 2974-2980.

CHROMOSOMAL LOCATION

Genetic locus: Ifnb1 (mouse) mapping to 4 C4.

SOURCE

IFN-β (MIB-3F7.3) is a Armenian hamster monoclonal antibody raised against recombinant IFN-β of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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.

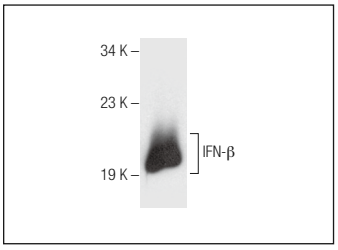
APPLICATIONS

IFN-β (MIB-3F7.3) is recommended for detection of IFN-β of mouse 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)].

Suitable for use as control antibody for IFN-β siRNA (m): sc-39604, IFN-β shRNA Plasmid (m): sc-39604-SH and IFN-β shRNA (m) Lentiviral Particles: sc-39604-V.

Molecular Weight of IFN-β: 20 kDa.

DATA



IFN-β (MIB-3F7.3): sc-53593. Western blot analysis of mouse recombinant IFN-β.

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.