

# IFN- $\beta$ (MIB-2B2.2): sc-53592

## BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN- $\alpha$  genes, one IFN- $\beta$  gene, one IFN- $\omega$  (also known as IFN- $\alpha$  II1) gene and a number of IFN- $\omega$  pseudogenes, are clustered on human chromosome 9. IFN- $\alpha$  and - $\beta$  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- $\omega$  is antigenically different from human IFN- $\alpha$ , IFN- $\beta$  or IFN- $\gamma$ , 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- $\alpha$ R) interacts with IFN- $\alpha$ , IFN- $\beta$  and IFN- $\omega$ , and seems to be a multisubunit receptor.

## REFERENCES

1. Adolf, G.R. 1987. Antigenic structure of human interferon- $\omega$ 1 (interferon  $\alpha$  II1): comparison with other human interferons. *J. Gen. Virol.* 68: 1669-1676.
2. Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine  $\alpha$ -interferon receptors. *FEBS Lett.* 350: 281-286.
3. Hussain, M., et al. 1996. Identification of interferon- $\alpha$  7, - $\alpha$  14, and - $\alpha$  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 - $\alpha$ , - $\beta$  and - $\omega$ . *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- $\beta$  in cervical carcinoma cells. *Oncogene* 24: 2536-2546.
7. Siren, J., et al. 2005. IFN- $\alpha$  regulates TLR-dependent gene expression of IFN- $\alpha$ , IFN- $\beta$ , 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- $\beta$ -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- $\beta$  (MIB-2B2.2) is a Armenian hamster monoclonal antibody raised against recombinant IFN- $\beta$  of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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

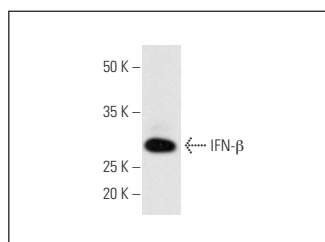
IFN- $\beta$  (MIB-2B2.2) is recommended for detection of IFN- $\beta$  of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

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

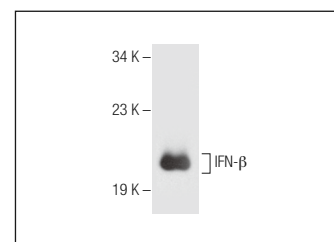
Molecular Weight of IFN- $\beta$ : 20 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242.

## DATA



IFN- $\beta$  (MIB-2B2.2): sc-53592. Western blot analysis of IFN- $\beta$  expression in CTLL-2 whole cell lysate.



IFN- $\beta$  (MIB-2B2.2): sc-53592. Western blot analysis of mouse recombinant IFN- $\beta$ .

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.