

## IFN- $\beta$ (E-20): sc-17565

### 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. Interferons- $\alpha$  and - $\beta$  are cytokines that are widely known to induce potent anti-viral activity. IFN- $\alpha$  and - $\beta$  exert a variety of other biological effects, including anti-tumor 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

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- Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons- $\alpha$ - $\beta$  and - $\omega$ . *J. Immunol. Methods* 195: 55-61.
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- 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.

### CHROMOSOMAL LOCATION

Genetic locus: IFNB1 (human) mapping to 9p21.3.

### SOURCE

IFN- $\beta$  (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IFN- $\beta$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17565 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

Store at 4 $^{\circ}$  C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### APPLICATIONS

IFN- $\beta$  (E-20) is recommended for detection of IFN- $\beta$  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), 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).

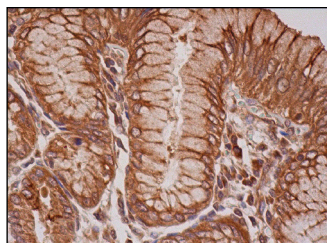
Suitable for use as control antibody for IFN- $\beta$  siRNA (h): sc-39603, IFN- $\beta$  shRNA Plasmid (h): sc-39603-SH and IFN- $\beta$  shRNA (h) Lentiviral Particles: sc-39603-V.

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

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz<sup>™</sup>: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

### DATA



IFN- $\beta$  (E-20): sc-17565. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic and membrane staining of glandular cells.

### 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) or our catalog for detailed protocols and support products.

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