



## IFN- $\tau$ (I-14): sc-28073

### BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN- $\alpha$  genes, 1 IFN- $\beta$  gene, 1 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- $\beta$ , IFN- $\tau$  or IFN- $\gamma$ , but is a component of natural mixtures of IFN species produced by virus-induced leukocytes or Burkitt's lymphoma cells. IFN- $\tau$ , a secreted monomer used in treatment for multiple sclerosis, has antiviral, antibacterial and anticancer activities. 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

- 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.
- Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons- $\alpha$ - $\beta$  and - $\omega$ . *J. Immunol. Methods* 195: 55-61.
- 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.
- <http://harvester.embl.de/harvester/Q86W/Q86WN2.htm>
- Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine  $\alpha$ -interferon receptors. *FEBS Letts.* 350: 281-286.
- Cutrone, E.C. and Langer, J.A. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. *FEBS Letts.* 404: 197-202.

### SOURCE

IFN- $\tau$  (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of IFN- $\tau$  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-28073 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### PROTOCOLS

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

### APPLICATIONS

IFN- $\tau$  (I-14) is recommended for detection of IFN- $\tau$  of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFN-t siRNA (h): sc-105552.

### 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941.

### RESEARCH USE

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