# IFN- $\tau$ (S-18): sc-28071



The Power to Question

## **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- $\beta$ , 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**

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- 2. Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine  $\alpha$ -interferon receptors. FEBS Lett. 350: 281-286.
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- 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.
- Cutrone, E.C. and Langer, J.A. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. FEBS Lett. 404: 197-202.
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- 7. Kimura, K., et al. 2004. Effects of oxidative stress and inhibitors of the pentose phosphate pathway on sexually dimorphic production of IFN- $\tau$  by bovine blastocysts. Mol. Reprod. Dev. 68: 88-95.

# **CHROMOSOMAL LOCATION**

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

#### **SOURCE**

IFN- $\tau$  (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IFN- $\tau$  of human origin.

# **PRODUCT**

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

Blocking peptide available for competition studies, sc-28071 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

IFN- $\tau$  (S-18) is recommended for detection of IFN- $\tau$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

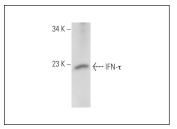
Suitable for use as control antibody for IFN- $\tau$  siRNA (h): sc-105552, IFN- $\tau$  shRNA Plasmid (h): sc-105552-SH and IFN- $\tau$  shRNA (h) Lentiviral Particles: sc-105552-V.

Positive Controls: human heart extract: sc-363763.

# **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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

# **DATA**



IFN- $\tau$  (S-18): sc-28071. Western blot analysis of IFN- $\tau$  expression in human heart tissue extract.

# **STORAGE**

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

## **RESEARCH USE**

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

# **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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