

## IFN- $\alpha$ 2 (AB5): sc-51976

### BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN- $\alpha$  genes (one of which is IFN- $\alpha$ 2), 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

- 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.
- Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine  $\alpha$ -interferon receptors. *FEBS Lett.* 350: 281-286.
- 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.
- Cutrone, E.C., et al. 1997. Contributions of cloned type I interferon receptor subunits to differential ligand binding. *FEBS Lett.* 404: 197-202.
- Rozera, C., et al. 1999. Interferon (IFN)- $\beta$  gene transfer into TS/A adenocarcinoma cells and comparison with IFN- $\alpha$ : differential effects on tumorigenicity and host response. *Am. J. Pathol.* 154: 1211-1222.
- Barthe, C., et al. 2001. Expression of interferon- $\alpha$  (IFN- $\alpha$ ) receptor 2c at diagnosis is associated with cytogenetic response in IFN- $\alpha$ -treated chronic myeloid leukemia. *Blood* 97: 3568-3573.
- Eriksen, K.W., et al. 2004. Bi-phasic effect of interferon (IFN)- $\alpha$ : IFN- $\alpha$  up- and downregulates interleukin-4 signaling in human T cells. *J. Biol. Chem.* 279: 169-176.
- Suyama, T., et al. 2005. Upregulation of the interferon- $\gamma$  (IFN- $\gamma$ )-inducible chemokines IFN-inducible T cell  $\alpha$  chemoattractant and monokine induced by IFN- $\gamma$  and of their receptor CXCR3 in human renal cell carcinoma. *Cancer* 103: 258-267.

### CHROMOSOMAL LOCATION

Genetic locus: IFNA2 (human) mapping to 9p21.3.

### SOURCE

IFN- $\alpha$ 2 (AB5) is a mouse monoclonal antibody raised against recombinant human interferon  $\alpha$ 2.

### PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

IFN- $\alpha$ 2 (AB5) is recommended for detection of IFN- $\alpha$ 2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for IFN- $\alpha$ 2 siRNA (h): sc-63324, IFN- $\alpha$ 2 shRNA Plasmid (h): sc-63324-SH and IFN- $\alpha$ 2 shRNA (h) Lentiviral Particles: sc-63324-V.

Molecular Weight of IFN- $\alpha$ 2: 19 kDa.

### 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](http://www.scbt.com) for detailed protocols and support products.