

# IFN- $\alpha$ 2 (A00033.01): sc-81019

## BACKGROUND

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

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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.
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. Rozera, C., et al. 1999. Interferon (IFN)- $\beta$  gene transfer into TS/Adenocarcinoma cells and comparison with IFN- $\alpha$ : differential effect on tumorigenicity and host response. *Am. J. Pathol.* 154: 1211-1222.
7. 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.
8. Eriksen, K.W., et al. 2004. Biphasic effect of interferon (IFN)- $\alpha$ : IFN- $\alpha$  up and downregulates interleukin-4 signaling in human T cells. *J. Biol. Chem.* 279: 169-176.

## CHROMOSOMAL LOCATION

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

## SOURCE

IFN- $\alpha$ 2 (A00033.01) is a mouse monoclonal antibody raised against recombinant IFN- $\alpha$ 2 of human origin.

## PRODUCT

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

## APPLICATIONS

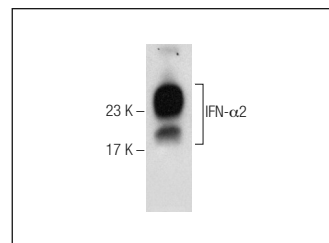
IFN- $\alpha$ 2 (A00033.01) is recommended for detection of IFN- $\alpha$ 2 a and b of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting 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- $\alpha$ 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.

Positive Controls: U-937 cell lysate: sc-2239.

## DATA



IFN- $\alpha$ 2 (A00033.01): sc-81019. Western blot analysis of IFN- $\alpha$ 2 expression in U-937 whole cell lysate.

## 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.