

IFN- α 1 (K9): sc-130499

BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN- α genes (two of which are IFN- α 1 and IFN- α 13), one IFN- β gene, one IFN- ω (also known as IFN- α II1) gene and a number of IFN- ω pseudogenes, are clustered on human chromosome 9. IFN- α and - β 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- ω is antigenically different from human IFN- α , IFN- β or IFN- γ , 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- α R) interacts with IFN- α , IFN- β and IFN- ω , and seems to be a multi-subunit receptor.

REFERENCES

- Adolf, G.R. 1987. Antigenic structure of human interferon ω 1 (interferon α 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 α -interferon receptors. *FEBS Lett.* 350: 281-286.
- Hussain, M., et al. 1996. Identification of interferon- α 7, - α 14 and - α 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- α , - β and - ω . *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)- β gene transfer into TS/A adenocarcinoma cells and comparison with IFN- α : differential effects on tumorigenicity and host response. *Am. J. Pathol.* 154: 1211-1222.
- Barthe, C., et al. 2001. Expression of interferon- α (IFN- α) receptor 2c at diagnosis is associated with cytogenetic response in IFN- α -treated chronic myeloid leukemia. *Blood* 97: 3568-3573.
- Eriksen, K.W., et al. 2004. Bi-phasic effect of interferon (IFN)- α : IFN- α 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 γ (IFN- γ)-inducible chemokines IFN-inducible T cell chemoattractant and monokine induced by IFN- γ and of their receptor CXCR3 in human renal cell carcinoma. *Cancer* 103: 258-267.

SOURCE

IFN- α 1 (K9) is a mouse monoclonal antibody raised against recombinant IFN- α 1 of porcine origin.

STORAGE

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

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

Available azide-free for neutralization of the bioactivity of pig IFN- α 1, sc-130499 L, 200 μ g/0.1 ml.

APPLICATIONS

IFN- α 1 (K9) is recommended for detection of IFN- α 1 of porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); also recommended for detection of IFN- α of porcine and human origin, as well as IFN- α 2a and IFN- α 2b of human origin.

Molecular Weight of IFN- α 1: 19 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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.

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.