

IFN- ω (OMG-4): sc-65420

BACKGROUND

The genes encoding type I interferons (IFNs), which include 14 IFN- α genes, 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. Interferons- α and - β are cytokines that are widely known to induce potent antiviral activity. IFN- α and - β 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 multisubunit receptor.

REFERENCES

1. 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.
2. Lim, J.K., et al. 1994. Intrinsic ligand binding properties of the human and bovine α -interferon receptors. FEBS Lett. 350: 281-286.
3. 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.
4. Mire-Sluis, A.R., et al. 1996. An anti-cytokine bioactivity assay for interferons- α , - β and - ω . 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)- 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.
7. 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.
8. 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.
9. Suyama, T., et al. 2005. Upregulation of the interferon γ (IFN- γ)-inducible chemokines IFN-inducible T cell α chemoattractant and monokine induced by IFN- γ and of their receptor CXCR3 in human renal cell carcinoma. Cancer 103: 258-267.

CHROMOSOMAL LOCATION

Genetic locus: IFNW1 (human) mapping to 9p21.3.

SOURCE

IFN- ω (OMG-4) is a mouse monoclonal antibody raised against IFN- ω of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking of IFN- ω , sc-65420 L, 100 μ g/0.1 ml.

APPLICATIONS

IFN- ω (OMG-4) is recommended for detection of IFN- ω of human origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IFN- ω siRNA (h): sc-39609, IFN- ω shRNA Plasmid (h): sc-39609-SH and IFN- ω shRNA (h) Lentiviral Particles: sc-39609-V.

Molecular Weight of IFN- ω : 22 kDa.

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 for detailed protocols and support products.