

IFN- α 2a (hBA-165): sc-4623

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. IFN- α and IFN- β are cytokines that are widely known to induce potent anti-viral activity. IFN- α and - β 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- 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- α 1 (interferon- α II1): comparison with other human interferons. *J. Gen. Virol.* 68: 1669-1676.
2. Lim, J.K., Xiong, J., Carrasco, N. and Langer, J.A. 1994. Intrinsic ligand binding properties of the human and bovine α -interferon receptors. *FEBS Lett.* 350: 281-286.
3. Hussain, M., Gill, D.S. and Liao, M.J. 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., Page, L.A., Meager, A., Igaki, J., Lee, J., Lyons, S. and Thorpe, R. 1996. An anti-cytokine bioactivity assay for interferons- α , - β and - ω . *J. Immunol. Methods* 195: 55-61.
5. 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.

SOURCE

IFN- α 2a (hBA-165) is produced in *E. coli* as 19.2 kDa biologically active protein corresponding to 165 amino acids of IFN- α 2a of human origin.

PRODUCT

IFN- α 2a (hBA-165) is purified from bacterial lysates (> 98%); supplied as 100 μ g purified protein.

BIOLOGICAL ACTIVITY

IFN- α 2a (hBA-165) is biologically active as determined by viral resistance assay.

Specific Activity: Greater than 2.7×10^8 IU/mg.

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.

RECONSTITUTION

In order to avoid freeze/thaw damaging of the active protein, dilute protein when first used to desired working concentration. Either a sterile filtered standard buffer (such as 50mM TRIS or 1X PBS) or water can be used for the dilution. Store any thawed aliquot in refrigeration at 2° C to 8° C for up to four weeks, and any frozen aliquot at -20° C to -80° C for up to one year. It is recommended that frozen aliquots be given an amount of standard cryopreservative (such as Ethylene Glycol or Glycerol 5-20% v/v), and refrigerated samples be given an amount of carrier protein (such as heat inactivated FBS or BSA to 0.1% v/v) or non-ionic detergent (such as Triton X-100 or Tween 20 to 0.005% v/v), to aid stability during storage.

SELECT PRODUCT CITATIONS

1. Li, W., Hao, Q., He, L., Meng, J., Li, M., Xue, X., Zhang, C., Li, H., Zhang, W. and Zhang, Y. 2015. Recombinant IFN- α 2a-NGR exhibits higher inhibitory function on tumor neovessels formation compared with IFN- α 2a *in vivo* and *in vitro*. *Cytotechnology* 67: 1039-1050.

STORAGE

Store desiccated at -20° C; stable for one year from the date of shipment.