SANTA CRUZ BIOTECHNOLOGY, INC.

IFN-α2b (hBA-165): sc-4624

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-αR) 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-ω1 (interferon-αII1): 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-α7, -α14, and -α21 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-α2b (hBA-165) is produced in *E. coli* as 19.2 kDa biologically active, GST-tagged fusion protein corresponding to 165 amino acids of IFN-α2b of human origin.

PRODUCT

IFN-α2b (hBA-165) is purified from bacterial lysates (>98%); supplied as 100 µg purified protein.

BIOLOGICAL ACTIVITY

IFN-α2b (hBA-165) is biologically active as determined by viral resistance assay.

Specific Activity: Greater than 2.0 x 10^8 units/mg.

RESEARCH USE

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

STORAGE

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

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 cryo-preservative (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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.