Anti-Human IFN-alpha Antibody [PS00-79] - BSA and Azide free (Detector)

HA721291

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Molecular Wt:	Predicted band size: 22 kDa
Clone number:	PS00-79

Description: IFN-alpha is a pharmaceutical drug composed of natural interferon alpha (IFN-α). Interferon alfa is used in a variety of treatments, including certain forms of leukemia, malignant melanoma, non-Hodgkin's lymphoma, hepatitis B, and hepatitis C. It is typically administered as an injection under the skin. Interferon alfa contains a mixture of several proteins, all with structural, serological, and functional properties typical for natural interferon alpha (IFN-α). IFN-α8 enhances the proliferation of human B cells, as well as being able to activate NK cells. The subtypes α10 and α2, along with α8, are the most efficient and powerful NK cell activators. Subtypes α21 and α2 enhance the expression of IFN-gamma-inducible protein-10 (IP-10) in dendritic cells. Activated dendritic cells initiate immune responses and induce the expression of IP-10, a chemokine which promotes a Th1 inflammatory response. IFN-α1 causes increased HLA-II expression, and can directly inhibit tumor cell growth in vitro. However, it is a poor activator of NK cells, has relatively little antiviral activity, does not induce B cell proliferation, and does not enhance HLA-I or tumor antigen expression. Despite its apparent inactivity, it is still used clinically in the treatment of metastatic renal cell carcinoma, with a reported lower toxicity than the recombinant IFN-α2. Overall, IFN-α has a general inflammatory action which skews the immune response towards a Th1 profile.

Immunogen:	Recombinant full length protein.
Positive control:	Recombinant human IFN-alpha protein.
Subcellular location:	Secreted.
Database links:	SwissProt: P01562 Human
Recommended Dilutions:	
ELISA(Det)	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PS00-80] to IFN-alpha (Capture) (HA721290).
Storage Buffer:	PBS (pH7.4).
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

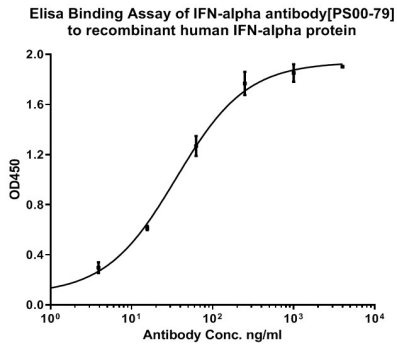

Fig1: The binding activity of IFN-alpha (HA721291) with recombinant human IFN-alpha protein.

Immobilized recombinant human IFN-alpha protein at 1 μg/ml overnight at 4℃. Then blocked with 1xTBS/1%BSA for 1 hour at 37℃, and incubated with the primary antibody (HA721291) for 45min at 37℃. Then the plate was washed and incubated with 50 μl per well of Goat anti-Rabbit IgG-HRP for 0.5 hour at 37℃. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

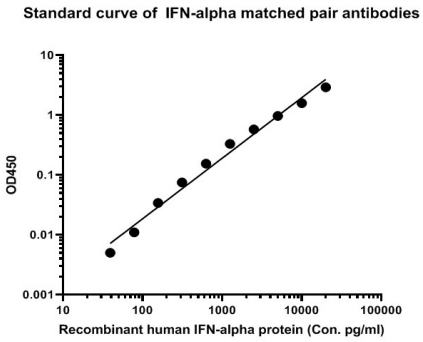

Fig2: Standard curve of IFN-alpha matched pair antibodies:

Sandwich ELISA analysis of IFN-alpha matched pair antibodies Elisa assay was performed by coating wells of a 96-well plate with 50 μl per well of capture antibody HA721290 [PS00-80] diluted in carbonate/bicarbonate buffer, at a concentration of 4 μg/mL overnight at 4℃. Wells of the plate were washed, blocked with 150 μl 1% BSA/PBST blocking buffer, and incubated with serial diluted recombinant IFN-alpha protein starting from 20 ug/ml to 19 pg/ml for 1 hour at 37℃. The plate was washed and incubated with 50 μl per well of detect antibody [PS00-79] (Biotin, 1:2,000) for 1 hour at 37℃. Then the plate was washed and incubated with 50 μl per well of Streptavidin-HRP for 0.5 hour at 37℃. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Woo MH, Burnakis TG (March 1997). "Interferon alfa in the treatment of chronic viral hepatitis B and C". The Annals of Pharmacotherapy. 31 (3): 330–7.
2. "Interferon alfa - Drug Information - Chemocare". chemocare.com. Retrieved 2021-10-17.