

# Biotin Conjugated Anti-Human Interferon gamma Antibody [PSH01-47]

## HA722645B



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA(Det)
<b>Clone number:</b>	PSH01-47

**Description:** Type II interferon produced by immune cells such as T-cells and NK cells that plays crucial roles in antimicrobial, antiviral, and antitumor responses by activating effector immune cells and enhancing antigen presentation. Primarily signals through the JAK-STAT pathway after interaction with its receptor IFNGR1 to affect gene regulation. Upon IFNG binding, IFNGR1 intracellular domain opens out to allow association of downstream signaling components JAK2, JAK1 and STAT1, leading to STAT1 activation, nuclear translocation and transcription of IFNG-regulated genes. Many of the induced genes are transcription factors such as IRF1 that are able to further drive regulation of a next wave of transcription. Plays a role in class I antigen presentation pathway by inducing a replacement of catalytic proteasome subunits with immunoproteasome subunits. In turn, increases the quantity, quality, and repertoire of peptides for class I MHC loading. Increases the efficiency of peptide generation also by inducing the expression of activator PA28 that associates with the proteasome and alters its proteolytic cleavage preference. Up-regulates as well MHC II complexes on the cell surface by promoting expression of several key molecules such as cathepsins B/CTSB, H/CTSH, and L/CTSL. Participates in the regulation of hematopoietic stem cells during development and under homeostatic conditions by affecting their development, quiescence, and differentiation.

<b>Conjugate:</b>	Biotin-conjugated
<b>Immunogen:</b>	Recombinant protein within human Interferon gamma aa 24-161.
<b>Positive control:</b>	Recombinant Human Interferon gamma protein (HA210762).
<b>Subcellular location:</b>	Secreted.
<b>Database links:</b>	SwissProt: P01579 Human
<b>Recommended Dilutions:</b>	
<b>ELISA(Det)</b>	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH01-45] or [PSH01-46] to Human Interferon gamma (Capture) (HA721683) or (HA721684).
<b>Storage Buffer:</b>	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% ProClin300.
<b>Storage Instruction:</b>	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
<b>Purity:</b>	Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

Technical: 0086-571-89986345

Service mail: support@huabio.cn

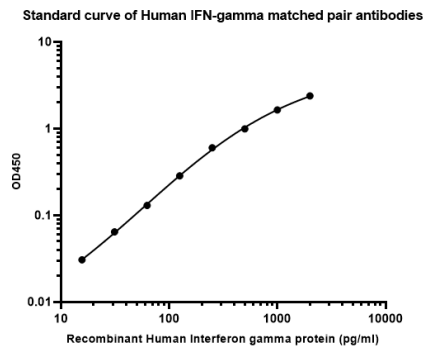
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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

**Fig1:** Standard curve of human IFNG matched pair antibodies:

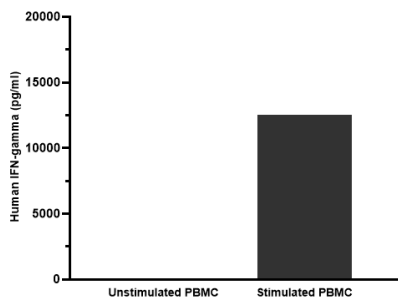
Capture: HA721683, Interferon gamma Rabbit mAb [PSH01-45]  
Detector: HA721685, Interferon gamma Rabbit mAb [PSH01-47]



Sandwich ELISA analysis of human IFNG matched pair antibodies  
Elisa assay was performed by coating wells of a 96-well plate with 100  $\mu$ l per well of capture antibody [PSH01-45] diluted in carbonate/bicarbonate buffer, at a concentration of 4  $\mu$ g/mL overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1%BSA blocking buffer, and incubated with serial diluted IFNG protein starting from 2500 pg/ml to 0 pg/ml and detect antibody [PSH01-47]-Biotin (0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. 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:** Interpolated concentrations of native IFN-gamma in human PBMC cell culture supernatant.

Capture: HA721683, Interferon gamma Rabbit mAb [PSH01-45]  
Detector: HA721685, Interferon gamma Rabbit mAb [PSH01-47]



PBMC cells were stimulated with 10  $\mu$ g/ml PHA-M or vehicle control and incubated for 48 hours. The concentrations of IFN-gamma were interpolated from the IFN-gamma standard curves and corrected for sample dilution. Undiluted samples are PHA-M stimulated PBMC supernatant 10% and unstimulated PBMC supernatant 10%. The mean IFN-gamma concentration was determined to be 12,543 pg/ml in PHA-M stimulated PBMC supernatant and undetectable in the unstimulated PBMC supernatant.

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

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### Background References

1. Hisamatsu H., Shimbara N., Saito Y., Kristensen P., Hendil K.B., Fujiwara T., Takahashi E., Tanahashi N., Tamura T., Ichihara A., Tanaka K. Newly identified pair of proteasomal subunits regulated reciprocally by interferon gamma. J. Exp. Med. 183:1807-1816 (1996)
2. El Bougrini J., Pampin M., Chelbi-Alix M.K. Arsenic enhances the apoptosis induced by interferon gamma: key role of IRF-1. Cell. Mol. Biol. 52:9-15 (2006)

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