

## Anti-Human TNF alpha Antibody [PS01-07] - BSA and Azide free (Detector)

# HA721266



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human
<b>Applications:</b>	ELISA(Det)
<b>Molecular Wt:</b>	Predicted band size: 26 kDa
<b>Clone number:</b>	PS01-07

**Description:** Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR. It is mainly secreted by macrophages and can induce cell death of certain tumor cell lines. It is potent pyrogen causing fever by direct action or by stimulation of interleukin-1 secretion and is implicated in the induction of cachexia, Under certain conditions it can stimulate cell proliferation and induce cell differentiation. Impairs regulatory T-cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation. Up-regulates the expression of protein phosphatase 1 (PP1), which dephosphorylates the key 'Ser-418' residue of FOXP3, thereby inactivating FOXP3 and rendering Treg cells functionally defective. Key mediator of cell death in the anticancer action of BCG-stimulated neutrophils in combination with DIABLO/SMAC mimetic in the RT4v6 bladder cancer cell line. Induces insulin resistance in adipocytes via inhibition of insulin-induced IRS1 tyrosine phosphorylation and insulin-induced glucose uptake. Induces GKAP42 protein degradation in adipocytes which is partially responsible for TNF-induced insulin resistance. Plays a role in angiogenesis by inducing VEGF production synergistically with IL1B and IL6.

**Immunogen:** Recombinant protein within full length protein.

**Positive control:** Recombinant TNF-alpha protein.

**Subcellular location:** Cell membrane, Secreted.

**Database links:** SwissProt: P01375 Human

**Recommended Dilutions:**  
**ELISA(Det)** Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PS00-40] to TNF alpha (Capture) (HA721265).

**Storage Buffer:** PBS (pH7.4).

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

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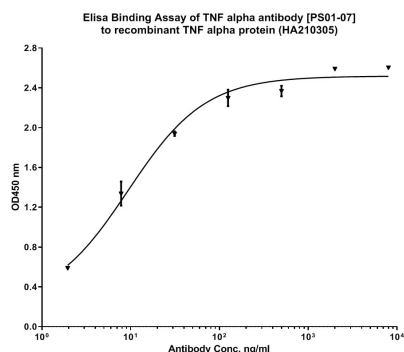
Orders:0086-571-88062880

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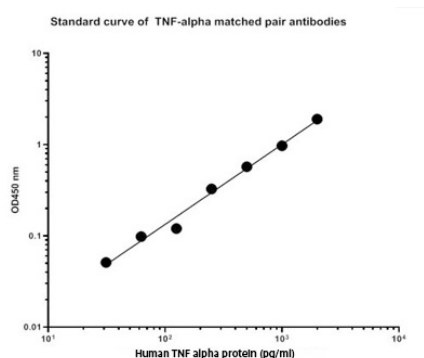
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## Images



**Fig1:** The binding activity of TNF-alpha (HA721266) with recombinant TNF-alpha protein.

Immobilized recombinant TNF-alpha protein at 1  $\mu\text{g/ml}$  overnight at 4°C. Then blocked with 1xTBS/1%BSA for 1 hour at 37°C, and incubated with the primary antibody (HA721266) for 45min at 37°C.



**Fig2:** Standard curve of TNF-alpha matched pair antibodies: Sandwich ELISA analysis of TNF-alpha matched pair antibodies. Elisa assay was performed by coating wells of a 96-well plate with 50  $\mu\text{l}$  per well of capture antibody HA721265 [PS00-40] diluted in carbonate/bicarbonate buffer, at a concentration of 2  $\mu\text{g/mL}$  overnight at 4°C. Wells of the plate were washed, blocked with 150  $\mu\text{l}$  1% BSA/PBST blocking buffer, and incubated with serial diluted recombinant TNF-alpha protein starting from 2000  $\text{pg/ml}$  to 31.25  $\text{pg/ml}$  for 1 hour at 37°C. The plate was washed and incubated with 50  $\mu\text{l}$  per well of detect antibody [PS01-07] (Biotin, 1:4,000) for 1 hour at 37°C. Then the plate was washed and incubated with 50  $\mu\text{l}$  per well of Streptavidin-HRP for 0.5 hour at 37°C. 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. Capture/detect antibodies, recombinant TNF-alpha protein, Streptavidin-HRP are diluted in 1% BSA/PBST.

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

## Background References

1. Nie H., Zheng Y., Li R., Guo T.B., He D., Fang L., Liu X., Xiao L., Chen X., Wan B., Chin Y.E., Zhang J.Z. Phosphorylation of FOXP3 controls regulatory T cell function and is inhibited by TNF-alpha in rheumatoid arthritis. *Nat. Med.* 19:322-328 (2013)
2. Jinesh G.G., Chundururu S., Kamat A.M. Smac mimetic enables the anticancer action of BCG-stimulated neutrophils through TNF-alpha but not through TRAIL and FasL. *J. Leukoc. Biol.* 92:233-244 (2012)

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