

# Human TNFalpha ELISA

Cat.n° 31673019U1

This ImmunoTools ELISA for quantification of natural and recombinant human **Tumor Necrosis Factor alpha (TNFa)** in cell culture supernatants and body fluids contains appropriate reagents sufficient for processing of 1 microplates (1 x 96 wells; 100 µl/well)

**Typical standard curve range:** 31 – 2000 pg/ml

**Detection limit under optimal conditions:** 22 pg/ml

## Content:

1x vial lyophilized anti-human TNFa Capture-Antibody (**red cap**)

1x vial lyophilized anti-human TNFa Detector-Antibody (**yellow cap**)

1x vial lyophilized recombinant human TNFa standard (**50 ng rh TNFa**) (white cap)

1x vial liquid Poly-HRP-Streptavidin-HS (**blue cap**)

Spin down all vials before use

## Additional material required:

96well-Microplates

Wash-Buffer (e.g. PBS + 0.05% Tween20)

Coating-Buffer (e.g. PBS)

Blocking-Buffer / Reagent-Diluent (e.g. PBS + 2% BSA + 0.05% Tween20)

Stop-Solution (e.g. 2 M H<sub>2</sub>SO<sub>4</sub>)

TMB-Solution

## Note:

All steps of incubation except HRP-Streptavidin and TMB substrate can be carried out over-night at 2 – 8° C.

Do not use solutions containing sodium azide, nor add sodium azide to the supplied reagents. Sodium azide inactivates the peroxidase.

## Storage:

Protect from light!

Store at 2-8° C or longterm storage at -20° C.

Reconstituted reagents should be stored at -20° C. Please prevent repeated freeze-thaw cycles.

The performance of the reagents is guaranteed until the expiration date shown on the label.

**For research only.** Not for use in diagnostic or therapeutic procedures.

**ImmunoTools** Excellent Quality - Advantageously priced

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## **Human TNF $\alpha$ -ELISA-procedure:**

### **Coating**

Reconstitute the lyophilized capture-antibody in 100  $\mu$ l PBS.  
Dilute capture-antibody 1:100 in coating-buffer (100  $\mu$ l capture-antibody in 10 ml PBS).  
Subsequently transfer 100  $\mu$ l of this working-solution to each well and incubate overnight at room temperature



Remove capture-antibody completely



### **Blocking**

Transfer 300  $\mu$ l blocking-buffer to each well and incubate 1 h at room temperature



Remove Blocking-buffer completely



### **Addition of standard & sample**

Dilute standard & samples in reagent-diluent and transfer 100  $\mu$ l of each mixture in the respective wells in duplicates.

Standard: Make serial dilutions in reagent-diluent and begin with a high standard and end with blanks.  
The standard vial of this set contains **50 ng lyophilized rh TNF $\alpha$** . Reconstitute this in exactly 1 ml reagent-diluent (stock solution = 50 ng/ml) and choose a sufficient high standard working solution for your assay  
Incubate at room temperature for 2 h.



Wash 5x with washing-buffer



### **Addition of biotinylated detector-antibody**

Reconstitute the lyophilized detector-antibody in 100  $\mu$ l blocking-buffer.  
Dilute detector-antibody 1:100 in reagent-diluent (100  $\mu$ l detector-antibody in 10 ml reagent-diluent).  
Subsequently transfer 100  $\mu$ l of this working-solution to each well and incubate 2 h at room temperature



Wash 5x with washing-buffer



### **Addition of Poly-HRP-Streptavidin-HS**

Dilute Poly-HRP-Streptavidin-HS 1:1000 in reagent-diluent (10  $\mu$ l in 10 ml reagent-diluent).  
Subsequently transfer 100  $\mu$ l of this working-solution to each well and incubate 30 min at room temperature.



Wash 5x with washing-buffer



### **Addition of TMB substrate**

Warm the solution to room temperature before use.  
Add 100  $\mu$ l of the TMB to each well and incubate at room temperature up to 60 minutes\*  
When the enzymatic colour reaction is sufficiently proceeded stop the reaction by adding of 50  $\mu$ l stop solution



Read the microplate at **450 nm**

(if wavelength correction is available, set to 540 nm, 570 nm or 630 nm as reference)

\*The speed of enzymatic colour development is influenced by many customer-specific factors. Therefore the incubation time is variable und specific for each test system. The development of the colour reaction has to be controlled and should be stopped at an appropriate time point.

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