

Human TNF alpha ELISA Kit ab46087

★★★★★ [1 Abreviews](#) [27 References](#) [2 Images](#)

Overview

Product name	Human TNF alpha ELISA Kit				
Detection method	Colorimetric				
Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Sample	6			3.3%
	Inter-assay				
	Sample	n	Mean	SD	CV%
	Sample	6			9%
Sample type	Cell culture supernatant, Serum, Plasma				
Assay type	Sandwich (quantitative)				
Sensitivity	= 10 pg/ml				
Range	25 pg/ml - 800 pg/ml				
Recovery	107 %				
	Sample specific recovery				
	Sample type		Average %		Range
	Serum		81		74% - 90%
Assay time	3h 40m				
Assay duration	Multiple steps standard assay				
Species reactivity	Reacts with: Human				
Product overview	Human TNF alpha ELISA kit (ab46087) is a quantitative ELISA assay for the measurement of TNF alpha in supernatants, buffered solutions, serum and plasma samples.				

A monoclonal antibody specific TNF alpha has been coated onto the wells of the microtiter strips provided. Samples, including standards of known TNF alpha concentrations, control specimens or unknowns are pipetted into these wells. During the first incubation, the standards or samples and

a biotinylated monoclonal antibody specific for TNF alpha are simultaneously incubated. After washing, the enzyme Streptavidin-HRP, that binds the biotinylated antibody is added, incubated and washed. A TMB substrate solution is added which acts on the bound enzyme to induce a colored reaction product. The intensity of this colored product is directly proportional to the concentration of TNF alpha present in the samples.

This kit will recognize both endogenous and recombinant Human TNF alpha.

Get results in 90 minutes with Human TNF alpha ELISA Kit ([ab181421](#)) from our SimpleStep ELISA® range.

Platform

Microplate

Properties

Storage instructions

Store at +4°C. Please refer to protocols.

Components	Identifier	1 x 96 tests	2 x 96 tests
10X Standard Diluent Buffer	Black	1 x 15ml	1 x 25ml
200X Wash Buffer	White	1 x 10ml	2 x 10ml
Biotinylated Antibody Diluent	Red	1 x 7.5ml	1 x 13ml
Biotinylated anti-TNF alpha	Red	1 x 400µl	2 x 400µl
Chromogen TMB Substrate Solution		1 x 11ml	1 x 24ml
HRP Diluent	Red	1 x 12ml	1 x 23ml
Plastic Plate Covers		1 x 2 units	1 x 4 units
Standard Diluent (Serum)		1 x 7ml	2 x 7ml
Stop Reagent	Black	1 x 11ml	2 x 11ml
Streptavidin-HRP		2 x 5µl	4 x 5µl
TNF alpha Control	Yellow	2 vials	4 vials
TNF alpha Microplate (12 x 8 well strips)		1 unit	2 units
TNF alpha Standard		2 vials	4 vials

Function

Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFB. 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.

Involvement in disease

Genetic variations in TNF are a cause of susceptibility psoriatic arthritis (PSORAS) [MIM:607507]. PSORAS is an inflammatory, seronegative arthritis associated with psoriasis. It is

a heterogeneous disorder ranging from a mild, non-destructive disease to a severe, progressive, erosive arthropathy. Five types of psoriatic arthritis have been defined: asymmetrical oligoarthritis characterized by primary involvement of the small joints of the fingers or toes; asymmetrical arthritis which involves the joints of the extremities; symmetrical polyarthritis characterized by a rheumatoidlike pattern that can involve hands, wrists, ankles, and feet; arthritis mutilans, which is a rare but deforming and destructive condition; arthritis of the sacroiliac joints and spine (psoriatic spondylitis).

Sequence similarities

Belongs to the tumor necrosis factor family.

Post-translational modifications

The soluble form derives from the membrane form by proteolytic processing.

The membrane form, but not the soluble form, is phosphorylated on serine residues.

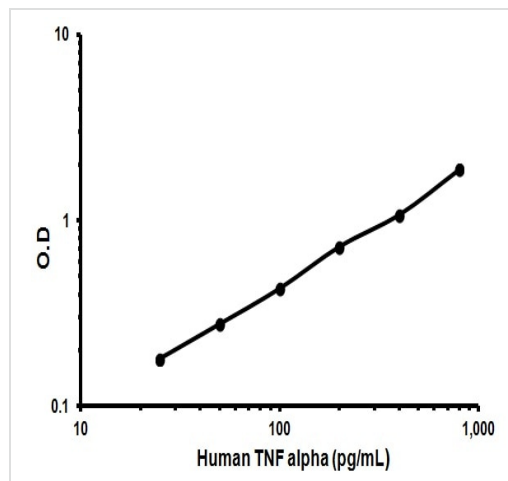
Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1.

O-glycosylated; glycans contain galactose, N-acetylgalactosamine and N-acetylneuraminic acid.

Cellular localization

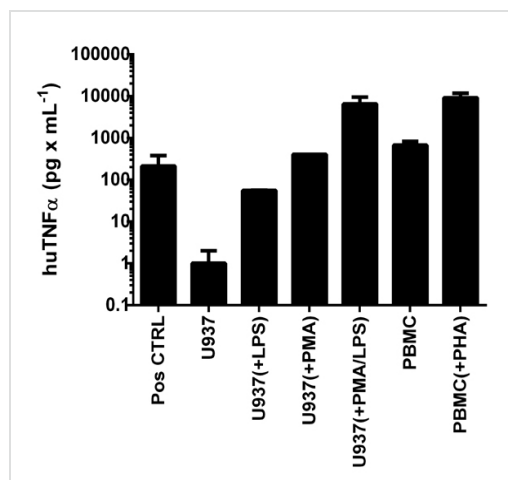
Secreted and Cell membrane.

Images



Typical Standard Curve

Representative standard curve using ab46087



Sandwich ELISA - TNF alpha Human ELISA Kit
(ab46087)

TNF α was measured in cell culture medium from U937 control cells, or cells stimulated with LPS (1 μ g x mL⁻¹; 6 h) or PMA (10 ng x mL⁻¹; 24 h) with LPS and control and stimulated PBMCs (PHA 10 μ g x mL⁻¹; 3 days). Results are shown with background signal subtracted (duplicates \pm SD), with the positive control from ab46087 included.

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