

Product datasheet

Human TNF alpha ELISA Kit ab100654

10 References 5 Images

Overview

Product name	Human TNF alpha ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma
Assay type	Sandwich (quantitative)
Sensitivity	< 30 pg/ml
Range	24.58 pg/ml - 6000 pg/ml
Recovery	94 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	96.43	84% - 104%
Serum	94.53	82% - 103%
Plasma	91.92	80% - 102%

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Abcam's TNF alpha Human ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Human TNF alpha in serum, plasma and cell culture supernatants. (Human TNF alpha concentration is pretty low in normal serum/plasma, it may not be detected in this assay).

This assay employs an antibody specific for Human TNF alpha coated on a 96-well plate. Standards and samples are pipetted into the wells and TNF alpha present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human TNF alpha antibody is added. After washing away unbound biotinylated antibody, HRP conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of TNF alpha bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

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

Notes Optimization may be required with urine samples.

Platform Microplate

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
5X Assay Diluent B	1 x 15ml
600X HRP-Streptavidin Concentrate	1 x 200µl
Assay Diluent A	1 x 30ml
Biotinylated anti-Human TNF alpha	2 vials
Recombinant Human TNF alpha Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml
TNF alpha Microplate (12 x 8 wells)	1 unit

Function Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR2. 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.

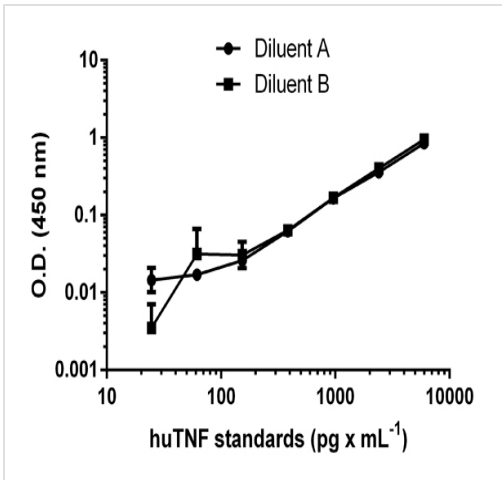
Post-translational modifications The soluble form derives from the membrane form by proteolytic processing. The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1.

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

Cellular localization

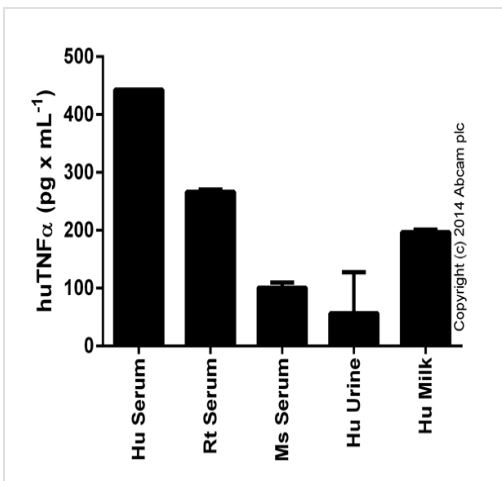
Secreted and Cell membrane.

Images



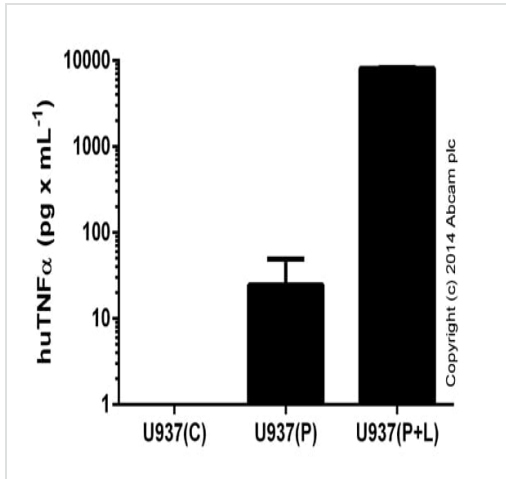
Standard curve of huTNF-8 with background signal subtracted (duplicates; +/- SD).

Sandwich ELISA - TNF alpha Human ELISA Kit (ab100654)



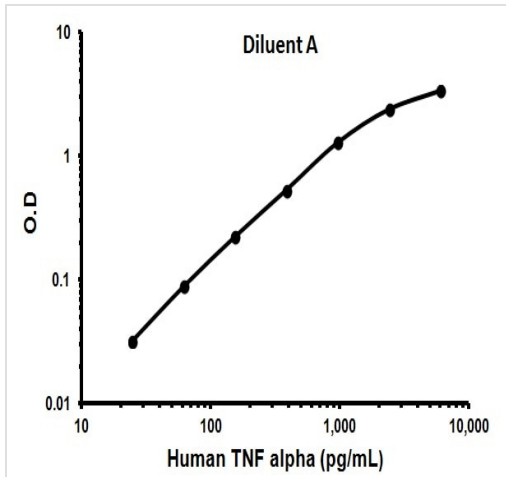
huTNF α measured in biological fluids, background signal subtracted (duplicates +/- SD).

Sandwich ELISA - TNF alpha Human ELISA Kit (ab100654)



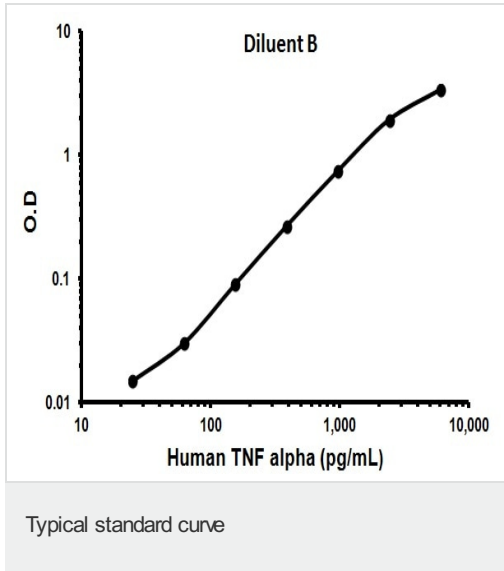
TNF α detected in supernatants from control cells (C) or cells stimulated for 24 hours with 50 ng x mL $^{-1}$ of PMA ([ab120297](#)) (P), and PMA with the addition of 1 μ g x mL $^{-1}$ of LPS (Sigma) (P+L) for the last 6 hours. PBMCs were stimulated for 48 hours with 2 % PHA-M (LifeTechnologies). Results shown after background signal was subtracted (duplicates +/- SD).

Sandwich ELISA - TNF alpha Human ELISA Kit
(ab100654)



Representative standard curve using ab100654

Typical standard curve



Representative standard curve using ab100654

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