

## Product datasheet

# Rat TNF alpha ELISA Kit ab100784

★★★★★ [1 Abreviews](#) [6 References](#) [3 Images](#)

### Overview

<b>Product name</b>	Rat TNF alpha ELISA Kit
<b>Detection method</b>	Colorimetric
<b>Sample type</b>	Cell culture supernatant, Serum, Plasma
<b>Assay type</b>	Sandwich (quantitative)
<b>Sensitivity</b>	< 25 pg/ml
<b>Range</b>	82.3 pg/ml - 20000 pg/ml
<b>Recovery</b>	96 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	101.54	89% - 108%
Serum	95.43	84% - 104%
Plasma	93.79	82% - 102%

**Assay duration** Multiple steps standard assay

**Species reactivity** **Reacts with:** Rat

**Product overview** Abcam's TNF alpha Rat ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Rat TNF alpha in serum, plasma, and cell culture supernatants.

This assay employs an antibody specific for Rat 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-Rat 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 450nm.

**Platform** Microplate

### Properties

**Storage instructions**

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

Components	1 x 96 tests
200X HRP-Streptavidin Concentrate	1 x 200µl
20X Wash Buffer	1 x 25ml
5X Assay Diluent B	1 x 15ml
Assay Diluent A	1 x 30ml
Biotinylated anti-Rat TNF alpha	2 vials
Recombinant Rat 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.

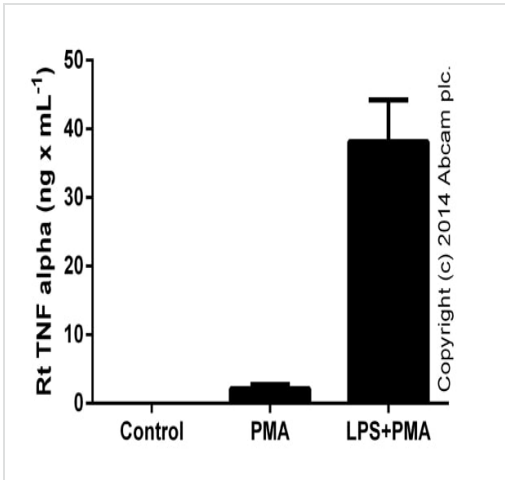
**Post-translational modifications**

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**

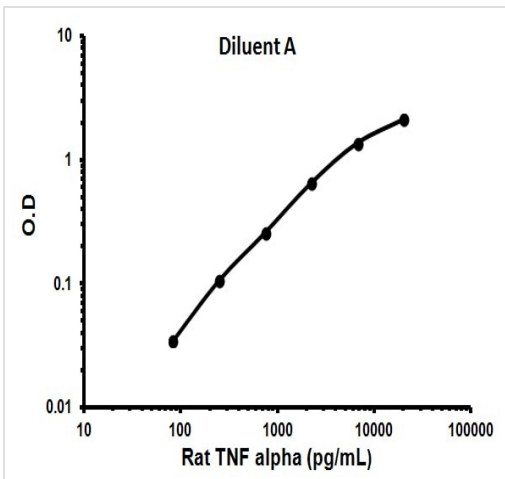
Secreted and Cell membrane.

**Images**



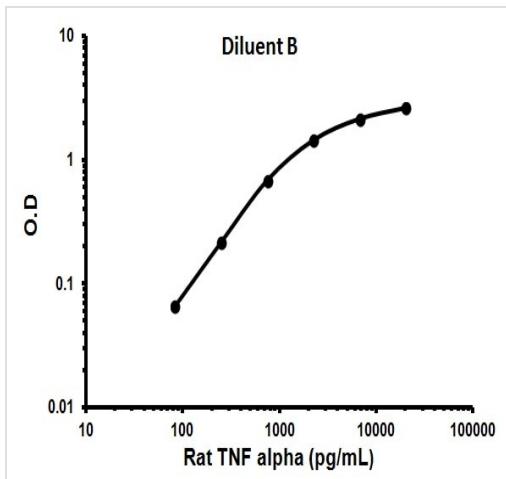
ELISA: TNF alpha Rat ELISA Kit (ab100784)

Rat TNF alpha measured in culture supernatants (dilution range 1/1-1/200) from control NR8383 cells or cells stimulated for 24 hours with 50 ng x mL<sup>-1</sup> of PMA ([ab120297](#)) and PMA with the addition of 1 ug x mL<sup>-1</sup> of LPS (Sigma) for the last 6 hours (duplicates +/- SD).



Typical Standard Curve

Representative Standard Curve using ab100784.



Representative Standard Curve using ab100784.

Typical Standard Curve

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