

Tumor Necrosis Factor-alpha ELISA Kit | TNF-alpha elisa kit

Tumor Necrosis Factor-alpha (TNF-alpha)

CATALOG #
AAA77883

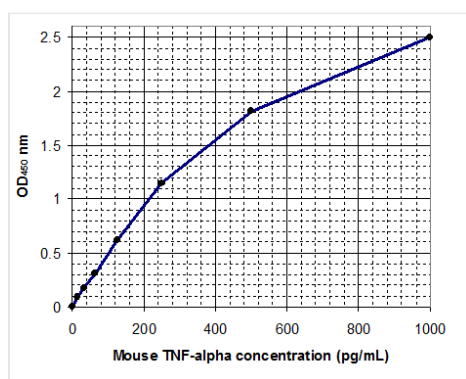
PRODUCT SYNONYMS

Tumor Necrosis Factor-alpha; Tumor Necrosis Factor-alpha (TNF-alpha); Tumor Necrosis Factor-alpha (TNF-a); TNF-alpha elisa kit

PRODUCT SPECIFICATIONS

Sequence Length	312
Samples	Serum and Cell Culture Supernatant
Assay Type	Sandwich
Sensitivity	The minimum detectable dose of mouse TNF-alpha using a standard curve generated with Calibrator Diluent I or Calibrator Diluent II is 4.5pg/mL.
Intra-assay Precision	To determine within-run precision, three different samples of known concentration were assayed by replicates of eighteen in 1 assay.
Inter-assay Precision	To determine between-run precision, three different samples of known concentration were assayed in eight different assays.
Intended Uses	This Mouse TNF-alpha (alpha) ELISA Kit is to be used for the in vitro quantitative determination of mouse tumour necrosis factor alpha (mouse TNF-alpha) concentrations in serum and cell culture supernatant. This kit is intended FOR LABORATORY RESEARCH USE ONLY.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for TNF-alpha elisa kit	Principle of the assay: This mouse TNF-alpha enzyme linked immunosorbent assay (ELISA) applies a technique called a quantitative sandwich immunoassay. The microtiter plate provided in this kit has been pre-coated with a monoclonal antibody specific to mouse TNF-alpha. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated monoclonal antibody preparation specific for mouse TNF-alpha and incubated. Mouse TNF-alpha if present, will bind and become immobilized by the antibody pre-coated on the wells and then be "sandwiched" by biotin conjugate. The microtiter plate wells are thoroughly washed to remove unbound mouse TNF-alpha and other components of the sample. In order to quantify the amount of mouse TNF-alpha present in the sample, avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Avidin is a tetramer containing four identical subunits that each has a high affinity-binding site for biotin. The wells are thoroughly washed to remove all unbound HRP-conjugated Avidin and a TMB (3,3',5,5' tetramethylbenzidine) substrate solution is added to each well. The enzyme (HRP) and substrate are allowed to react over a short incubation period. Only those wells that contain mouse TNF-alpha, biotin-conjugated antibody, and enzymeconjugated Avidin will exhibit a change in colour. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the colour change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. In order to measure the concentration of mouse TNF-alpha in the samples, this kit includes two calibration diluents (Calibrator Diluent I for serum/plasma testing and Calibrator Diluent II for cell culture supernatant testing.) According to the testing system, the provided standard is diluted (2-fold) with the appropriate Calibrator Diluent and assayed at the same time as the samples. This allows the operator to produce a standard curve of Optical Density (O.D) versus mouse TNF-alpha concentration (pg/mL). The concentration of mouse TNF-alpha in the samples is then determined by comparing the O.D. of the samples to the standard curve. Background: Tumor Necrosis Factor alpha (TNF-alpha) is a multifunctional proinflammatory cytokine, mainly secreted by activated macrophages. The cytokine was named for its remarkable ability to cause hemorrhagic necrosis of tumors in mice. It is implicated with a variety of biological procedures including systemic inflammation, cell proliferation, apoptosis, lipid metabolism, and coagulation. It is well documented that TNF-alpha functions through its receptors, TNFR1 (p55) and TNFR2 (p75). TNF-alpha plays an important role in the immune response to bacterial, and certain fungal, viral, parasitic invasions, in tissue remodeling, autoimmune-diseases and the necrosis of specific tumors. The pleiotropic effect of TNF-alpha regulation is attributed to its ability to trigger multiple signaling pathways simultaneously. TNF-alpha hyper-expression in response to the components of some bacteria such as LPS can cause life threatening septic shock. Recombinant TNF-alpha, in combination with chemotherapy, has been applied for synergistic treatment of soft sarcomas, melanomas and other irresectable tumors. Anti-TNF-alpha therapy has been used for treatment of rheumatoid arthritis.
Product Categories/Family for TNF-alpha elisa kit	ELISA Kits for Mouse Cytokines and Receptors

NCBI AND UNIPROT INFORMATION

NCBI GI #	189409065
NCBI GeneID	100169660
NCBI Accession #	NP_001121579.1
NCBI GenBank Nucleotide #	NM_001128107.1
NCBI Official Full Name	tumor necrosis factor alpha
NCBI Official Symbol	tnfa
NCBI Protein Information	tumor necrosis factor alpha

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/tnf-alpha-elisa-kits/tumor-necrosis-factor-alpha/77883>