

Mouse TNF-alpha ELISA Kit | TNF-alpha elisa kit

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CATALOG #
AAA281312

REACTIVITY
Mouse

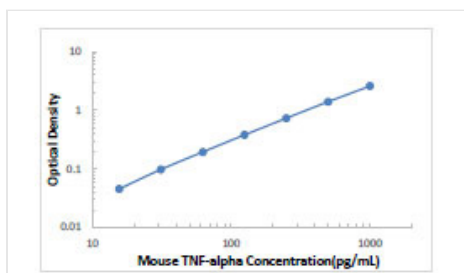
PRODUCT SYNONYMS

TNF-alpha; Mouse TNF-alpha ELISA Kit; TNF-alpha elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Mouse
Specificity	This assay recognizes both recombinant and natural mouse TNF-alpha. The factors listed below were prepared at 50ng/ml and assayed for cross-reactivity. No significant cross-reactivity was observed with the following: Recombinant mouse IL-1 IL-2 IL-3 IL-4 IL-5 IL-6 IL-8 IL-10 IL-12 IFN sTNF-RII EGF FGF PDGF CSF
Sequence Length	233
Samples	Cell culture supernates, serum and plasma
Assay Type	Quantitative Sandwich
Sensitivity	< 6.5pg/mL
Intra-assay Precision	Three samples of known concentration were tested 20 times on one plate to evaluate the Intra-plate precision.
Inter-assay Precision	Three samples of known concentration were tested 20 times separate assays to evaluate the Inter-plate precision. Assay were using two lots of components.
Preparation and Storage	Store at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for TNF-alpha elisa kit	Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for TNF-alpha has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any TNF-alpha present is bound by the immobilized antibody. Following incubation unbound samples are removed during a wash step, and then a detection antibody specific for TNF-alpha is added to the wells and binds to the combination of capture antibody-TNF-alpha in sample. Following a wash to remove any unbound combination, and enzyme conjugate is added to the wells. Following incubation and wash steps, a substrate is added. A colored product TMB is formed in proportion to the amount of TNF-alpha present in the sample. The reaction is terminated by addition of acid and absorbance is measured. A standard curve is prepared from seven TNF-alpha standard dilutions and TNF-alpha sample concentration determined. Background/Introduction: Tumor necrosis factor alpha (TNF-alpha), also known as cachectin and TNFSF1A, is the prototypic ligand of the TNF superfamily (1). It is a pleiotropic molecule that plays a central role in inflammation, immune system development, apoptosis, and lipid metabolism (2-5). TNF-alpha is also involved in a number of pathological conditions including asthma, Crohn's disease, rheumatoid arthritis, neuropathic pain, obesity, type 2 diabetes, septic shock, autoimmunity, and cancer (5-11). Mouse TNF-alpha is synthesized as a 26 kDa type II transmembrane protein that consists of a 35 amino acid (aa) cytoplasmic domain, a 21 aa transmembrane segment, and a 179 aa extracellular domain (ECD) (12). Within the ECD, mouse TNF-alpha shares 95% aa identity with rat, and 80% aa identity with canine, equine, feline, human, rabbit, and porcine TNF-alpha. It is produced by a wide variety of immune, epithelial, endothelial, and tumor cells. TNF-alpha is assembled intracellularly to form a noncovalently linked homotrimer which is expressed on the cell surface (13). Cell surface TNF-alpha can both induce the lysis of tumor cells and virus infected cells, and generate its own downstream cell signaling following ligation by soluble TNF RI (14, 15). Shedding of membrane bound TNF-alpha by TACE/ADAM17 releases the bioactive cytokine, a 55 kDa soluble trimer containing the TNF-alpha extracellular domain (16-18). TNF-alpha binds the ubiquitous 55-60 kDa TNF RI (19, 20) and the hematopoietic cell-restricted 78-80 kDa TNF RII (21, 22), both of which are also expressed as homotrimers (1, 23). Both type I and type II receptors bind TNF-alpha with comparable affinity and can promote NFkB activation (24-27). Only TNF RI, however, contains a cytoplasmic death domain which triggers the activation of apoptosis (3, 28). Soluble forms of both types of receptors are released into human serum and urine, and can neutralize the biological activity of TNF (29-31).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	37210
NCBI GeneID	7124
UniProt Accession #	P01375; O43647; Q9P1Q2; Q9UIV3
Molecular Weight	25,644 Da
NCBI Official Full Name	TNF-alpha
NCBI Official Synonym Full Names	tumor necrosis factor
NCBI Official Symbol	TNF
NCBI Official Synonym Symbols	DIF; TNFA; TNFSF2; TNLG1F; TNF-alpha
NCBI Protein Information	tumor necrosis factor
UniProt Protein Name	Tumor necrosis factor
UniProt Gene Name	TNF
UniProt Synonym Gene Names	TNFA; TNFSF2; TNF-a; NTF; ICD1; ICD2

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.