Human Tumor necrosis factor α,TNF-α ELISA KIT

Product Code	CSB-E04740h
Abbreviation	TNF
Target Name	tumor necrosis factor (TNF superfamily, member 2)
Uniprot No.	P01375
Alias	DADB-70P7.1, DIF, TNF-alpha, TNFA, TNFSF2, APC1 protein|TNF superfamily, member 2|TNF, macrophage-derived|TNF, monocyte-derived|cachectin|tumor necrosis factor alpha
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma, cell culture supernates, tissue homogenates, cell lysates
Detection Range	7.8 pg/mL-500 pg/mL
Sensitivity	1.95 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Immunology
Gene Names	TNF
Tag Info	quantitative
Protein Description	Sandwich

Description

Human TNF-α ELISA Kit is designed to quantify human TNF-α levels in the serum, plasma, cell culture supernates, tissue homogenates, or cell lysates. It quantitates human TNF-α with 1.95 pg/mL sensitivity and shows excellent specificity for human TNF-α. This human TNF-α ELISA kit includes both the capture and the detection antibodies for TNF-α as well as avidin conjugated Horseradish Peroxidase (HRP) and TMB substrate solution, which are the reagents used in color development step. The produced color develops in proportion to the amount of TNF-α in the sample. The color development is stopped and the color intensity is measured using a microplate reader.This ELISA kit has been cited in 95 publications.

TNF-α is an inflammatory cytokine generated by macrophages/monocytes during acute inflammation. It contributes to a wide range of signaling events within cells, resulting in necrosis or apoptosis. It also plays an important role in the resistance to infection and malignancies. TNF-α binds to two different

receptors TNFR1 and TNFR2, activating a downstream signal cascade, including NF-κB and MAPK pathways, evoking a variety of cellular responses, such as inflammation, host defense, cell survival, differentiation, and proliferation. Dysregulation of TNF-α signaling is related to chronic inflammation and autoimmune diseases. TNF-α inhibitors have been successfully produced and employed in the clinical treatment of autoimmune disorders such as Crohn's disease (CD) and RA due to TNF-α participation in the pathogenesis of autoimmune diseases.

Target Details

This gene encodes a multifunctional proinflammatory cytokine that belongs to the tumor necrosis factor (TNF) superfamily. This cytokine is mainly secreted by macrophages. It can bind to, and thus functions through its receptors TNFRSF1A/TNFR1 and TNFRSF1B/TNFBR. This cytokine is involved in the regulation of a wide spectrum of biological processes including cell proliferation, differentiation, apoptosis, lipid metabolism, and coagulation. This cytokine has been implicated in a variety of diseases, including autoimmune diseases, insulin resistance, and cancer. Knockout studies in mice also suggested the neuroprotective function of this cytokine.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%
Three samples of known concentration were tested twenty times on one plate to assess.
Inter-assay Precision (Precision between assays): CV%<10%
Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human TNF-α in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	96
	Range %	89-99
1:2	Average %	90
	Range %	85-95
1:4	Average %	97
	Range %	88-102
1:8	Average %	92
	Range %	85-100

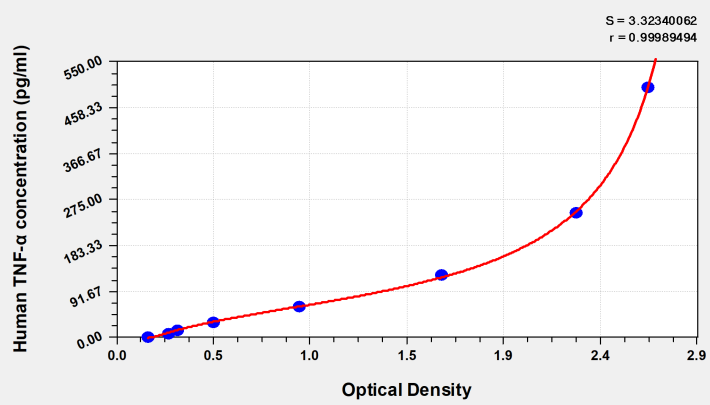
Recovery

The recovery of human TNF-α spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	97	94-101
EDTA plasma (n=4)	96	88-99

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



pg/ml	OD1	OD2	Average	Corrected
500	2.607	2.705	2.656	2.482
250	2.296	2.307	2.302	2.128
125	1.642	1.624	1.633	1.459
62.5	0.912	0.940	0.926	0.752
31.2	0.489	0.504	0.497	0.323
15.6	0.317	0.328	0.323	0.149
7.8	0.282	0.271	0.277	0.103
0	0.172	0.175	0.174	?

Msds

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