

ARG82319 Rat TNF alpha ELISA Kit

Package: 96 wells
Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG82319-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG82319-002	Standard	2 X 10 ng/vial	4°C
ARG82319-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG82319-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG82319-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG82319-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG82319-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG82319-008	25X Wash buffer	20 ml	4°C
ARG82319-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG82319-010	STOP solution	10 ml (Ready to use)	4°C
ARG82319-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG82319 Rat TNF alpha ELISA Kit is an Enzyme Immunoassay kit for the quantification of Rat TNF alpha in serum, plasma (heparin, EDTA) and cell culture supernatants.
Tested Reactivity	Rat
Tested Application	ELISA
Target Name	TNF alpha
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	1 pg/ml
Sample Type	Serum, plasma (heparin, EDTA) and cell culture supernatants.
Standard Range	15.6 - 1000 pg/ml
Sample Volume	100 µl
Precision	Intra-Assay CV: 6.4% Inter-Assay CV: 7.3%

Alternate Names Tumor necrosis factor ligand superfamily member 2; DIF; Cachectin; ICD2; ICD1; N-terminal fragment; TNF-a; TNFA; TNFSF2; TNF-alpha; Tumor necrosis factor; NTF

Application Instructions

Assay Time ~ 5 hours

Properties

Form 96 well

Storage instruction Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol TNF

Gene Full Name tumor necrosis factor

Background 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/TNFR1. 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. [provided by RefSeq, Jul 2008]

Function Cytokine that binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFR1. 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. Impairs regulatory T-cells (Treg) function in individuals with rheumatoid arthritis via FOXP3 dephosphorylation. Upregulates the expression of protein phosphatase 1 (PP1), which dephosphorylates the key 'Ser-418' residue of FOXP3, thereby inactivating FOXP3 and rendering Treg cells functionally defective. Key mediator of cell death in the anticancer action of BCG-stimulated neutrophils in combination with DIABLO/SMAC mimetic in the RT4v6 bladder cancer cell line.

The TNF intracellular domain (ICD) form induces IL12 production in dendritic cells. [UniProt]

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PTM The soluble form derives from the membrane form by proteolytic processing. The membrane-bound form is further proteolytically processed by SPPL2A or SPPL2B through regulated intramembrane proteolysis producing TNF intracellular domains (ICD1 and ICD2) released in the cytosol and TNF C-domain 1 and C-domain 2 secreted into the extracellular space.

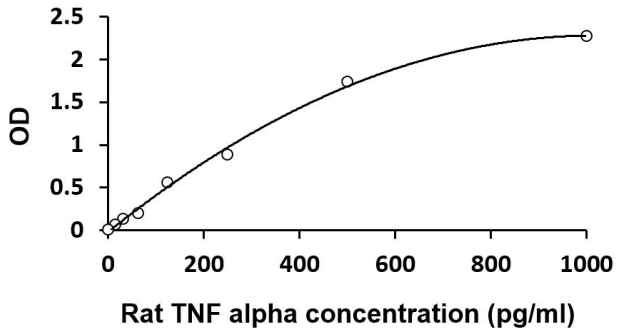
The membrane form, but not the soluble form, is phosphorylated on serine residues. Dephosphorylation of the membrane form occurs by binding to soluble TNFRSF1A/TNFR1.

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

Cellular Localization

Cell membrane; Single-pass type II membrane protein. Tumor necrosis factor, membrane form: Membrane; Single-pass type II membrane protein. Tumor necrosis factor, soluble form: Secreted. C-domain 1: Secreted. C-domain 2: Secreted. [UniProt]

Images



ARG82319 Rat TNF alpha ELISA Kit standard curve image

ARG82319 Rat TNF alpha ELISA Kit results of a typical standard run with optical density reading at 450 nm.