

Datasheet for ABIN921076

Soluble Tumor Necrosis Factor Receptor Type 1 (sTNF-R1)

ELISA Kit



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1 Image

Overview

Quantity:	96 tests
Target:	Soluble Tumor Necrosis Factor Receptor Type 1 (sTNF-R1)
Binding Specificity:	AA 30-211
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	7.8-500 pg/mL
Minimum Detection Limit:	7.8 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human TNFsR I
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate), Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: L30-T211
Specificity:	Expression system for standard: NSO,L30-T211
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<1pg/mL

Product Details

Material not included: Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

Target Details

Target: Soluble Tumor Necrosis Factor Receptor Type 1 (sTNF-R1)

Alternative Name: TNFsRI ([sTNF-R1 Products](#))

Background: Protein Function: Receptor for TNFSF2/TNF-alpha and homotrimeric TNFSF1/lymphotoxin-alpha. The adapter molecule FADD recruits caspase-8 to the activated receptor. The resulting death-inducing signaling complex (DISC) performs caspase-8 proteolytic activation which initiates the subsequent cascade of caspases (aspartate-specific cysteine proteases) mediating apoptosis. Contributes to the induction of non-cytocidal TNF effects including anti-viral state and activation of the acid sphingomyelinase.

Background: TNFsRI(also known as Soluble tumor necrosis factor receptor 1) is a cytokine receptor that binds tumor necrosis factors(TNF). In contrast, the p60(TNFRSF1A) and p80(TNFRSF1B) TNFA receptors self-assemble through a distinct functional domain in the TNFR extracellular domain, termed the pre-ligand assembly domain(PLAD), in the absence of ligand. Deletion of the PLAD results in monomeric presentation of p60 or p80. Flow cytometric analysis showed that efficient TNFA binding depends on receptor self-assembly. They also found that other members of the TNF receptor superfamily, including the extracellular domains of TRAIL(TNFRSF10A), CD40, and FAS(TNFRSF6), all self-associate but do not interact with heterologous receptors. By Southern blot analysis of human/Chinese hamster somatic cell hybrid DNA, the TNFR1 gene was mapped to 12pter-cen. And by nonradioactive in situ hybridization that the type 1 receptor(the p55 TNF receptor) is encoded by a gene located on chromosome 12p13.2.

Synonyms: Tumor necrosis factor receptor superfamily member 1A,Tumor necrosis factor receptor 1,TNF-R1,Tumor necrosis factor receptor type I,TNF-RI,TNFR-I,p55,p60,CD120a,Tumor necrosis factor receptor superfamily member 1A, membrane form,Tumor necrosis factor-binding protein 1,TBPI,TNFRSF1A,TNFAR, TNFR1,

Full Gene Name: Tumor necrosis factor receptor superfamily member 1A

Cellular Localisation: Cell membrane, Single-pass type I membrane protein . Golgi apparatus membrane, Single- pass type I membrane protein . Secreted . A secreted form is produced through proteolytic processing.

Target Details

Gene ID: 7132

UniProt: [P19438](#)

Application Details

Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

Comment: Sequence similarities: Contains 1 death domain.

Plate: Pre-coated

Protocol: human TNFsRIELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for TNFsRI has been precoated onto 96-well plates. Standards (NSO,L30-T211) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for TNFsRI is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human TNFsRI amount of sample captured in plate.

Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 74, Standard deviation: 2.52, CV(%): 3.4
- Sample 2: n=16, Mean(pg/ml): 133, Standard deviation: 6.52, CV(%): 4.9
- Sample 3: n=16, Mean(pg/ml): 261, Standard deviation: 14.9, CV(%): 5.7,
- Sample 1: n=24, Mean(pg/ml): 85, Standard deviation: 3.91, CV(%): 4.6
- Sample 2: n=24, Mean(pg/ml): 156, Standard deviation: 7.96, CV(%): 5.1
- Sample 3: n=24, Mean(pg/ml): 278, Standard deviation: 18.07, CV(%): 6.5

Restrictions: For Research Use only

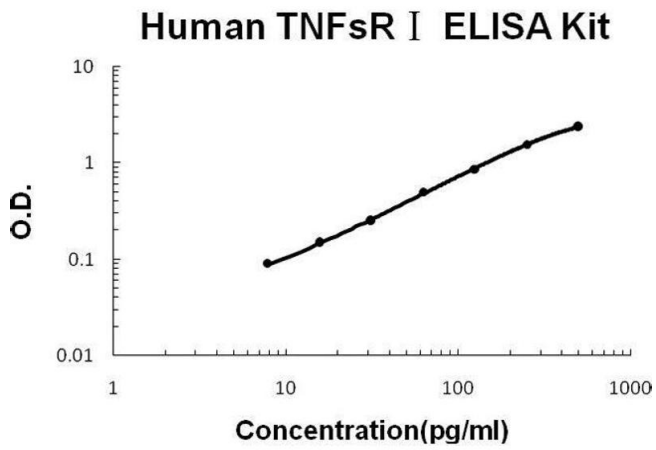
Handling

Handling Advice: Avoid multiple freeze-thaw cycles.

Storage: -20 °C,4 °C

Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

Expiry Date: 12 months



ELISA

Image 1. Human TNFsR I PicoKine ELISA Kit standard curve