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Datasheet for ABIN921077

TRAIL ELISA Kit

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Overview

Quantity:	96 tests
Target:	TRAIL (TNFSF10)
Binding Specificity:	AA 95-281
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human TRAIL
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Cell Lysate, Serum, Plasma (heparin), Plasma (EDTA), Saliva
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: T95-G281
Specificity:	Expression system for standard: NSO,T95-G281
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: TRAIL (TNFSF10)

Alternative Name: TNFSF10 ([TNFSF10 Products](#))

Background: Protein Function: Cytokine that binds to TNFRSF10A/TRAILR1, TNFRSF10B/TRAILR2, TNFRSF10C/TRAILR3, TNFRSF10D/TRAILR4 and possibly also to TNFRSF11B/OPG. Induces apoptosis. Its activity may be modulated by binding to the decoy receptors TNFRSF10C/TRAILR3, TNFRSF10D/TRAILR4 and TNFRSF11B/OPG that cannot induce apoptosis.

Background: In the field of cell biology, TNF-related apoptosis-inducing ligand (TRAIL), is a protein which functions as a ligand which induces the process of cell death called apoptosis. TRAIL has also been designated CD253 (cluster of differentiation 253). Tumor necrosis factor (TNF) family cytokines function as prominent mediators of immune regulation and the inflammatory response. Most TNF family cytokines are expressed as type II transmembrane proteins, with homology confined to approximately 150 C-terminal residues. The TNF ligands interact with a parallel family of receptors. TRAIL binds to the death receptors DR4 (TRAIL-RI) and DR5 (TRAIL-RII). The process of apoptosis is caspase-8-dependent. Caspase-8 activates downstream effector caspases including procaspase-3, -6, and -7, leading to activation of specific kinases. TRAIL also binds the receptors DcR1 and DcR2, which do not contain a cytoplasmic domain (DcR1) or contain a truncated death domain (DcR2). The standard product used in this kit is recombinant human TRAIL with the molecular mass of 21KDa. It is expressed from the amino acids ectoderm T95--G28.

Synonyms: Tumor necrosis factor ligand superfamily member 10, Apo-2 ligand, Apo-2L, TNF-related apoptosis-inducing ligand, Protein TRAIL, CD253, TNFSF10, APO2L, TRAIL,

Full Gene Name: Tumor necrosis factor ligand superfamily member 10

Cellular Localisation: Membrane, Single-pass type II membrane protein.

Gene ID: 8743

UniProt: [P50591](#)

Pathways: [Apoptosis](#), [Positive Regulation of Endopeptidase Activity](#)

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: Belongs to the tumor necrosis factor family. Tissue Specificity: Widespread, most predominant in spleen, lung and prostate.
Plate:	Pre-coated
Protocol:	human TRAIL ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for TRAIL has been precoated onto 96-well plates. Standards (NSO,T95-G281) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for TRAIL 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 TRAIL amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human TRAIL standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, cell lysates, serum, plasma(heparin, EDTA) or saliva to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human TRAIL standard solution and each sample be measured in duplicate.
Assay Precision:	<ul style="list-style-type: none">• Sample 1: n=16, Mean(pg/ml): 102, Standard deviation: 4.59, CV(%): 4.5• Sample 2: n=16, Mean(pg/ml): 368, Standard deviation: 12.88, CV(%): 3.5• Sample 3: n=16, Mean(pg/ml): 637, Standard deviation: 39.5, CV(%): 6.2,• Sample 1: n=24, Mean(pg/ml): 167, Standard deviation: 13.36, CV(%): 8• Sample 2: n=24, Mean(pg/ml): 326, Standard deviation: 24.45, CV(%): 7.5• Sample 3: n=24, Mean(pg/ml): 624, Standard deviation: 48.67, CV(%): 7.8
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

Handling

Expiry Date: 12 months

Publications

Product cited in:

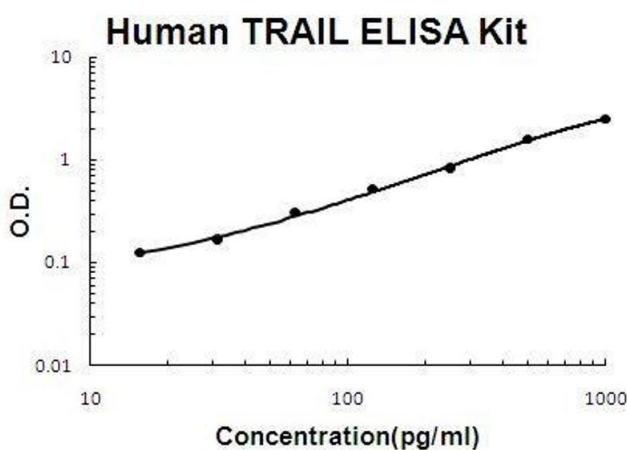
Ndisang, Chibbar: "Heme Oxygenase Improves Renal Function by Potentiating Podocyte-Associated Proteins in N ω -Nitro-L-Arginine-Methyl Ester (L-NAME)-Induced Hypertension." in: **American journal of hypertension**, Vol. 28, Issue 7, pp. 930-42, (2015) ([PubMed](#)).

Ndisang, Chibbar, Lane: "Heme oxygenase suppresses markers of heart failure and ameliorates cardiomyopathy in L-NAME-induced hypertension." in: **European journal of pharmacology**, Vol. 734, pp. 23-34, (2014) ([PubMed](#)).

Ndisang, Tiwari: "Mechanisms by which heme oxygenase rescue renal dysfunction in obesity." in: **Redox biology**, Vol. 2C, pp. 1029-1037, (2014) ([PubMed](#)).

Salley, Mishra, Tiwari, Jadhav, Ndisang: "The heme oxygenase system rescues hepatic deterioration in the condition of obesity co-morbid with type-2 diabetes." in: **PLoS ONE**, Vol. 8, Issue 11, pp. e79270, (2013) ([PubMed](#)).

Images



ELISA

Image 1. Human TRAIL PicoKine ELISA Kit standard curve