

Datasheet for ABIN1889406

**TXN ELISA Kit**[Go to Product page](#)**1** Image**1** Publication

## Overview

Quantity:	96 tests
Target:	TXN
Binding Specificity:	AA 2-105
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10.000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Thioredoxin
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: V2-V105
Specificity:	Expression system for standard: E.coli Immunogen sequence: V2-V105
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity:	<10pg/mL
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:	TXN
Alternative Name:	TXN ( <a href="#">TXN Products</a> )
Background:	<p>Protein Function: Participates in various redox reactions through the reversible oxidation of its active center dithiol to a disulfide and catalyzes dithiol-disulfide exchange reactions. Plays a role in the reversible S-nitrosylation of cysteine residues in target proteins, and thereby contributes to the response to intracellular nitric oxide. Nitrosylates the active site Cys of CASP3 in response to nitric oxide (NO), and thereby inhibits caspase-3 activity. Induces the FOS/JUN AP-1 DNA-binding activity in ionizing radiation (IR) cells through its oxidation/reduction status and stimulates AP-1 transcriptional activity.</p> <p>Background: Thioredoxin is a class of small redox proteins known to be present in all organisms. It is mapped to 9q31.3. Thioredoxins are proteins that act as antioxidants by facilitating the reduction of other proteins by cysteine thiol-disulfide exchange. They can also act as electron donors to peroxidases and ribonucleotide reductase. Thioredoxin is a 12-kD oxidoreductase enzyme containing a dithiol-disulfide active site. It plays a role in many important biological processes, including redox signaling. This gene also plays a central role in humans and is increasingly linked to medicine through their response to reactive oxygen species (ROS). VDUP1 is a key stress-responsive inhibitor of Thioredoxin activity in cardiomyocytes.</p> <p>Synonyms: Thioredoxin,Trx,ATL-derived factor,ADF,Surface-associated sulphhydryl protein,SASP,TXN,TRDX, TRX, TRX1,</p> <p>Full Gene Name: Thioredoxin</p> <p>Cellular Localisation: Nucleus. Cytoplasm. Secreted. Secreted by a leaderless secretory pathway. Predominantly in the cytoplasm in non irradiated cells. Radiation induces translocation of TRX from the cytoplasm to the nucleus.</p>
Gene ID:	7295
UniProt:	<a href="#">P10599</a>

## Target Details

Pathways: [Carbohydrate Homeostasis](#), [Cell RedoxHomeostasis](#)

## 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 thioredoxin family.
Plate:	Pre-coated
Protocol:	human Thioredoxin ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Thioredoxin has been precoated onto 96-well plates. Standards(E.coli, V2-V105) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Thioredoxin 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 Thioredoxin amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL human Thioredoxin 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, serum or plasma(heparin) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Thioredoxin standard solution and each sample be measured in duplicate.

Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(ng/ml): 0.89, Standard deviation: 0.05, CV(%): 5.6</li><li>• Sample 2: n=16, Mean(ng/ml): 3.62, Standard deviation: 0.17, CV(%): 4.7</li><li>• Sample 3: n=16, Mean(ng/ml): 6.83, Standard deviation: 0.37, CV(%): 5.4</li><li>• Sample 1: n=24, Mean(ng/ml): 0.87, Standard deviation: 0.07, CV(%): 8.0</li><li>• Sample 2: n=24, Mean(ng/ml): 3.85, Standard deviation: 0.24, CV(%): 6.2</li><li>• Sample 3: n=24, Mean(ng/ml): 7.12, Standard deviation: 0.41, CV(%): 5.8</li></ul>
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Restrictions: For Research Use only

## Handling

Handling Advice: Avoid multiple freeze-thaw cycles.

Storage: -20 °C, 4 °C

Handling

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

Publications

Product cited in:	Csősz, Lábiscsák, Kalló, Márkus, Emri, Szabó, Tar, Tózsér, Kiss, Márton: "Proteomics investigation of OSCC-specific salivary biomarkers in a Hungarian population highlights the importance of identification of population-tailored biomarkers." in: <b>PLoS ONE</b> , Vol. 12, Issue 5, pp. e0177282, (2017) ( <a href="#">PubMed</a> ).
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Images

