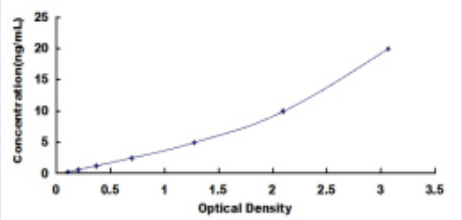
Thioredoxin (TRX) ELISA Kit for Rat

PRODUCT OVERVIEW

Product Name	Thioredoxin (Trx), ELISA Kit
Full Product Name	Rat Thioredoxin (Trx) ELISA Kit
Product Gene Name	Trx elisa kit
Product Synonym Names	TXN; ADF; SASP; TRDX; TRX1; ATL-derived factor; Surface-associated sulphydryl protein
Species Reactivity	Rat
Assay Type	Double-antibody Sandwich
Samples	Serum, Plasma and other biological fluids
Detection Range	0.312-20ng/mL
Sensitivity	0.115ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of Thioredoxin (Trx). No significant cross-reactivity or interference between Thioredoxin (Trx) and analogues was observed.
Preparation and Storage	The stability of kit is determined by the loss rate of activity. The loss rate of this kit is less than 5% within the expiration date under appropriate storage condition. To minimize extra influence on the performance, operation procedures and lab conditions, especially room temperature, air humidity, incubator temperature should be strictly controlled. It is also strongly suggested that the whole assay is performed by the same operator from the beginning to the end.
Molecular Weight	11,673 Da
3D Structure	ModBase 3D Structure for P11232
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Application	Enzyme-linked immunosorbent assay for Antigen Detection.
Intra-assay Precision (Precision within an assay)	3 samples with low, middle and high level Thioredoxin (Trx) were tested 20 times on one plate, respectively.
Inter-assay Precision (Precision between assays)	3 samples with low, middle and high level Thioredoxin (Trx) were tested on 3 different plates, 8 replicates in each plate.
CV(%) =	SD/meanX100
Intra-Assay	CV<10%
Inter-Assay	CV<12%
Product Categories/Family for Trx elisa kit	Metabolic pathway; Developmental science
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.

Related Product Information for Trx elisa kit	The test principle applied in this kit is Sandwich enzyme immunoassay. The microtiter plate provided in this kit has been pre-coated with an antibody specific to Thioredoxin (Trx). Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody specific to Thioredoxin (Trx). Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. After TMB substrate solution is added, only those wells that contain Thioredoxin (Trx), biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450nm ± 10nm. The concentration of Thioredoxin (Trx) in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Other Notes	Small volumes of Trx elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Trx purchase	MBS2024576 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Thioredoxin (Trx) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing Trx. The ELISA analytical biochemical technique of the MBS2024576 kit is based on Trx antibody-Trx antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect Trx antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, Trx. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of Trx elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Trx. It may not necessarily be applicable to this product.

NCBI GI #	16758644
NCBI GeneID	116484
NCBI Accession #	NP_446252.1
UniProt Primary Accession #	P11232
UniProt Related Accession #	P11232
GenBank Nucleotide #	NM_053800.3
NCBI Official Full Name	thioredoxin
NCBI Official Synonym Full Names	thioredoxin 1
NCBI Official Symbol	Txn1
NCBI Official Synonym Symbols	Txn
UniProt Protein Name	Thioredoxin
Protein Family	Histone-lysine N-methyltransferase
UniProt Gene Name	Txn
UniProt Synonym Gene Names	Txn1; Trx
UniProt Entry Name	THIO_RAT

NCBI Protein Information	thioredoxin
NCBI Summary for Trx	protein-disulfide reductase enzyme that is important for redox signalling during apoptosis and cell growth [RGD, Feb 2006]
UniProt Comments for Trx	TXN: 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. Homodimer; disulfide-linked. Interacts with TXNIP through the redox-active site. Interacts with MAP3K5 and CASP3. In case of infection, interacts with S.typhimurium protein slrP. Interacts with APEX1; the interaction stimulates the FOS/JUN AP-1 DNA- binding activity in a redox-dependent manner. Up-regulated by ionizing radiation. Belongs to the thioredoxin family. Protein type: Nuclear receptor co-regulator Cellular Component: cell soma; mitochondrion; axon; dendrite; cytoplasm; extracellular region; nucleus; cytosol Molecular Function: thioredoxin-disulfide reductase activity; enzyme binding; protein disulfide oxidoreductase activity; peptide disulfide oxidoreductase activity Biological Process: response to drug; negative regulation of protein export from nucleus; transcription, DNA-dependent; negative regulation of transcription from RNA polymerase II promoter; positive regulation of peptidyl-serine phosphorylation; glycerol ether metabolic process; response to selenium ion; response to radiation; regulation of transcription, DNA-dependent; cell redox homeostasis; regulation of protein import into nucleus, translocation; response to axon injury; response to activity; positive regulation of DNA binding
Research Articles on Trx	**1.** both type 1 and type 2 diabetic rats demonstrated a significant increase in TxnIP mRNA and reduction in thioredoxin activity when compared to non-diabetic animals.
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/rat-elisa-kits/thioredoxin-trx/2024576