



Human thioredoxin reductase, TrxR ELISA kit

Product Code	CSB-E09731h
Protein Biological Process 2	Anion transport
Abbreviation	TXNRD1
Protein Biological Process 1	Transport
Target Name	thioredoxin reductase 1
Uniprot No.	Q16881
Alias	GRIM-12, MGC9145, TR, TR1, TRXR1, TXNR, KM-102-derived reductase-like factor oxidoreductase thioredoxin reductase GRIM-12
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Protein Biological Process 3	Electron transport
Sample Types	serum, plasma, cell culture supernates, tissue homogenates, cell lysates
Detection Range	0.312 ng/mL-20 ng/mL
Sensitivity	0.078 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Cell Biology
Gene Names	TXNRD1
Tag Info	quantitative
Protein Description	Sandwich

Description

This Human TXNRD1 ELISA Kit was designed for the quantitative measurement of Human TXNRD1 protein in serum, plasma, cell culture supernates, tissue homogenates, cell lysates. It is a Sandwich ELISA kit, its detection range is 0.312 ng/mL-20 ng/mL and the sensitivity is 0.078 ng/mL.

Target Details

This gene encodes a member of the family of pyridine nucleotide oxidoreductases. This protein reduces thioredoxins as well as other substrates, and plays a role in selenium metabolism and protection against oxidative stress. The functional enzyme is thought to be a homodimer which uses FAD as a



cofactor. Each subunit contains a selenocysteine (Sec) residue which is required for catalytic activity. The selenocysteine is encoded by the UGA codon that normally signals translation termination. The 3' UTR of selenocysteine-containing genes have a common stem-loop structure, the sec insertion sequence (SECIS), that is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. Alternative splicing results in several transcript variants encoding the same or different isoforms.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of human TrxR in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	99
	Range %	87-104
1:2	Average %	101
	Range %	94-105
1:4	Average %	94
	Range %	85-99
1:8	Average %	100
	Range %	84-105

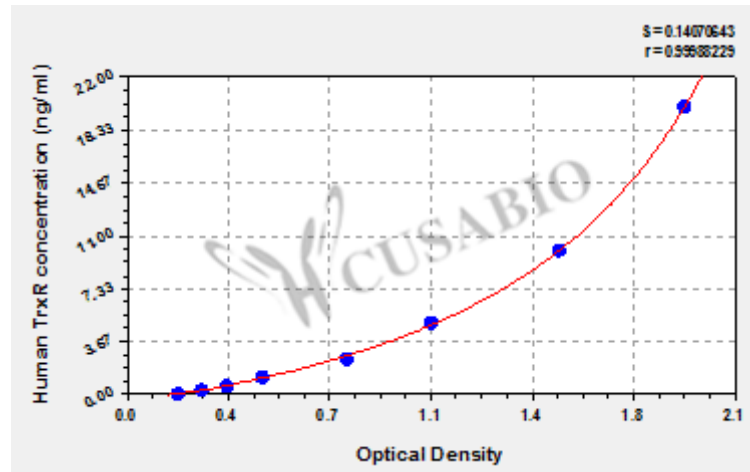
Recovery

The recovery of human TrxR spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	90	83-94
EDTA plasma (n=4)	102	91-107

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average	Corrected
20	1.994	1.943	1.969	1.787
10	1.555	1.501	1.528	1.346
5	1.091	1.062	1.077	0.895
2.5	0.776	0.784	0.780	0.598
1.25	0.484	0.476	0.480	0.298
0.625	0.359	0.347	0.353	0.171
0.312	0.270	0.263	0.267	0.085
0	0.185	0.179	0.182	?

Msds

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