

Recombinant human Thioredoxin Reductase 1/TXNRD1 protein

Catalog Number: ATGP0570

PRODUCT INFORMATION

Expression system

E.coli

Domain

161-647aa

UniProt No.

Q16881

NCBI Accession No.

NP_001087240.1

Alternative Names

GRIM 12, KDRF, KM 102 derived reductase like factor, MGC9145, Oxidoreductase, Thioredoxin reductase, Thioredoxin reductase 1, Thioredoxin reductase 1 cytoplasmic, Thioredoxin reductase 1 Gene associated with retinoid IFN induced mortality 12 protein, Thioredoxin reductase GRIM 12, TR, TR 1, TRXR 1, TXNR, TXNRD 1

PRODUCT SPECIFICATION

Molecular Weight

55.7 kDa (508aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

Formulation

Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 20% glycerol

Purity

> 95% by SDS-PAGE

Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity

Specific activity is > 15unit/mg, and was measured in a coupled assay with 5,5 -Dithiobis(2-nitrobenzoic acid) (DTNB) and NADPH. The amount of TNB generated by NADPH was measured in absorbance at 412 nm.

Tag

His-Tag

Application

SDS-PAGE, Enzyme Activity

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

Description

TXNRD1, also known as Thioredoxin reductase 1, is a part of a selenium-containing pyridine nucleotide-disulphide oxidoreductase family, which has a conserved catalytic site of Cys-Val-Asn-Val-Gly-Cys. This protein reduces thioredoxins as well as other substrates, and plays a role in selenium metabolism and protection against oxidative stress. Inhibition of TXNRD1 activity may provide for potential treatments of cancer, AIDS and other autoimmune diseases as well as bacterial infections and parasitic diseases. Recombinant human TXNRD1 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

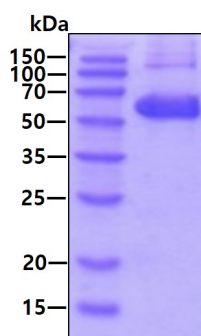
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IKATNNGKKE KIYSAERFLI ATGERPRYLG IPGDKEYCIS SDDLFSLPYC PGKTLVVGAS YVALECAGFL AGIGLDVTVM  
VRSILLRGFD QDMANKIGEH MEEHGIFIR QFVPIKVEQI EAGTPGRLRV VAQSTNSEEI IEGEYNTVML AIGRDACTRK  
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LTKKQLDSTI GIHPVCAEVF TTLSVTKRSG ASILQAGC
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General References

Ma X. et al. (2002) *J Biol Chem.* 277(25):22460-8.
Javvadi P. (2010) *Cancer Res.* 70(5):1941-50.

DATA

SDS-PAGE



3 μ g by SDS-PAGE under reducing condition and visualized by coomassie blue stain.