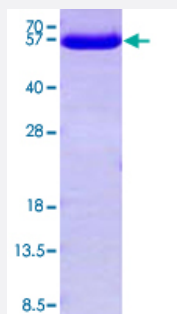


Bioactive

TXNRD1 (Human) Recombinant Protein

Catalog # P3509 Size 100 ug

Applications



Specification

Product Description

Human TXNRD1 (NP_001087240, 161 a.a. - 647 a.a.) partial recombinant protein with His tag expressed in *Escherichia coli*.

Sequence

MGSSHHHHHHSSGLVPRGSHMYDYDLIIIGGGSGGLAAAKEAAQYGKKVMVLD FVTPPLGTRW
GLGGTCVNVGCIPKKLMHQAALLGQALQDSRNYGWKVEETVKHWDWMIEAVQNHIGSLNWGY
RVALREKKVYENAYGQFIGPHRIKATNNKGKEKIYSAERFLIATGERPRYLGPDKKEYCISDDL
SLPYCPGKTLVVGASYVALECAAGFLAGIGLDVTVMVRSILLRGFDQDMANKIGEHEEHGKIFIRQF
VPIKVEQIEAGTPGRLRVVAQSTNSEEIIEGEYNTVMLAIGRDACTRKIGLETGVKINEKTGKIPVTD
EEQTNVPYIYAIGDILEDKVELTPVAIQAGRLLAQRLYAGSTVKCDYENVPTTVFTPLEYGACGLSEE
KAVEKFGEENIEVYHSYFWPLEWTIPSRDNNKCYAKIICNTKDNERVVGFHVLGPNAGEVTQGFAA
ALKCGLTKKQLDSTIGHPVCAEVFTTSLSVTKRSGASILQAGC

Host

Escherichia coli

Theoretical MW (kDa)

55.7

Form

Liquid

Preparation Method

Escherichia coli expression system

Purification

Conventional Chromatography

Concentration

0.5 mg/mL

Purity	> 95% by SDS-PAGE
Activity	Specific activity is > 15 units/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.
Quality Control Testing	Loading 3 ug protein in 15% SDS-PAGE
Storage Buffer	In PBS, pH 7.4 (20% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — TXNRD1

Entrez GeneID	7296
Protein Accession#	NP_001087240
Gene Name	TXNRD1
Gene Alias	GRIM-12, MGC9145, TR, TR1, TRXR1, TXNR
Gene Description	thioredoxin reductase 1
Omim ID	601112
Gene Ontology	Hyperlink
Gene Summary	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. [provided by RefSeq]
Other Designations	KM-102-derived reductase-like factor oxidoreductase thioredoxin reductase GRIM-12

Pathway

- [Pyrimidine metabolism](#)

Disease

- [Adenoma](#)
- [Alzheimer disease](#)
- [Amyotrophic lateral sclerosis](#)
- [Arsenic Poisoning](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Carcinoma](#)
- [Cognition](#)
- [Colorectal Neoplasms](#)
- [DNA Damage](#)
- [Genetic Predisposition to Disease](#)
- [Ovarian cancer](#)