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**Product Data Sheet**


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Product Name: TXNRD1 Human  
 Cat. No.: GP22335  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Thioredoxin reductase 1 cytoplasmic; TR; GRIM-12; Gene associated with retinoic and IFN-induced mortality 12 protein; KM-102-derived reductase-like factor; Thioredoxin reductase TR1; TXNRD1; GRIM12; KDRF; TR1; TXNR; TRXR1; MGC9145.		
Amino Acid Sequence	<p>MGSSHHHHH SSGLVPRGSH MYDYDLIIG GSGGLAAAK EAAQYGKKVM        VLDFVTPTPL GTRWGLGGTC VNVGCIPKKL MHQAALLGQALQDSRNYGWK        VEETVKHDWD RMIEAVQNH I GSLNWGYRVA LREKKVYEN AYGQFIGPHR        IKATNKGKE KIYSAERFLI ATGERPRYL GIPGDKEYCIS SDDLFSLPYC        PGKTLVVGAS YVALECAGFL AGIGLDVTVM VRSILLRGFD QDMANKIGEH        MEEHGIFIR QFVPIKVEQIEAGTPGRLRV VAQSTNSEEI IEGEYNTVML        AIGRDACTRK IGLETGVGKI NEKTGKIPVT DEEQTNVPYI YAIGDILEDK        VELTPVAIQAGRLLAQRLYA GSTVKCDYEN VPTTVFTPLE YGACGLSEEK        AVEKFGREENI EVYHSYFWPL EWTIPSRDNN KCYAKIICNT KDNERVVGFB        VLGPNAGEVT QGFAAALKCG LTKKQLDSTI GIHPVCAEVF TTLSVTKRSG        ASILQAGC.</p>		
Formulation	TXNRD1 Human solution (0.5mg/ml) containing 1x PBS pH-7.4 & 10% glycerol.		

**Introduction**

TXNRD1 belongs to the selenium-containing pyridine nucleotide-disulphide oxidoreductase family, which has a conserved catalytic site of Cys-Val-Asn-Val-Gly-Cys. TXNRD1 decreases thioredoxins as well as other substrates, and participates in selenium metabolism and protection against oxidative stress. Inhibition of TXNRD1 activity serves as a potential treatment for cancer, AIDS and other autoimmune diseases as well as bacterial infections and parasitic diseases.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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### Biological 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.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

### Background

TXNRD1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 508 amino acids (161-647 a.a.) and having a molecular mass of 55.7 kDa. TXNRD1 protein is fused to a 20 amino acid His tag at N-terminus and is purified by standard chromatography.

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