TRXR1/TXNRD1 Protein, Human (N-His)

Cat. No.:	HY-P77258A
Synonyms:	Thioredoxin reductase 1, cytoplasmic; GRIM-12; Thioredoxin reductase TR1; TR; KDRF
Species:	Human
Source:	E. coli
Accession:	Q16881 (Y161-C647)
Gene ID:	7296
Molecular Weight:	Approximately 60 kDa

PROPERTIES

AA Sequence	Y D Y D L I I I G G G S G G L A A A K E A A Q Y G K K V M V L D F V T P T P L G T R W G L G G T C V N V G C I P K K L M H Q A A L L G Q A L Q D S R N Y G W K V E E T V K H D W D R M I E A V Q N H I G S L N W G Y R V A L R E K K V V Y E N A Y G Q F I G P H R I K A T N N K G K E K I Y S A E R F L I A T G E R P R Y L G I P G D K E Y C I S S D D L F S L P Y C P G K T L V V G A S Y V A L E C A G F L A G I G L D V T V M V R S I L L R G F D Q D M A N K I G E H M E E H G I K F I R Q F V P I K V E Q I E A G T P G R L R V V A Q S T N S E E I I E G E Y N T V M L A I G R D A C T R K I G L E T V G V K I N E K T G K I P V T D E E Q T N V P Y I Y A I G D I L E D K V E L T P V A I Q A G R L L A Q R L Y A G S T V K C D Y E N V P T T V F T P L E Y G A C G L S E E K A V E K F G E E N I E V Y H S Y F W P L E W T I P S R D N N K C Y A K I I C N T K D N E R V V G F H V L G P N A G E V T Q G F A A A L K C G L T K K Q L D S T I G I H P V C A E V F T T L S V T K R S G A S I L Q A G C
Biological Activity	Data is not available.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, 200 mM arginine, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The TRXR1/TXNRD1 protein functions as a homodimeric flavoprotein crucial for the regulation of cellular redox reactions, growth, and differentiation by reducing disulfideprotein thioredoxin (Trx) to its dithiol-containing form. This protein, containing a selenocysteine residue at the C-terminal active site essential for catalysis, exhibits reductase activity on hydrogen peroxide (H2O2). Beyond its redox regulatory role, TRXR1/TXNRD1 also induces actin and tubulin polymerization, contributing to the formation of cell membrane protrusions. These multifaceted activities underscore its significance in cellular processes, highlighting its involvement in maintaining redox homeostasis and influencing key aspects of cellular morphology and signaling.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA