TRXR1/TXNRD1 Protein, Human (His)

Cat. No.:	HY-P77258
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 55 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

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.

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