

TRXR1/TXNRD1 Protein, Human, Recombinant (aa 161-647, His)

General Information

Synonyms:	thioredoxin reductase 1;TR1;TXNR;TR;TRXR1;GRIM-12
Protein Construction:	A DNA sequence encoding the human TXNRD1 isoform 1 (Q16881-1) (Tyr 161-Cys 647) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	Q16881-1
Molecular Weight:	55 kDa (predicted); 60 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Thioredoxin reductase 1 (TXNRD1) which is a selenocysteine-containing protein is overexpressed in many malignancies. TXNRD1 plays a key role in regulating cell growth and transformation, and protects cells against oxidative damage. We investigated the association between TXNRD1 polymorphisms and ATDH susceptibility. Moreover, TXNRD1 is an essential selenium-containing enzyme involved in detoxification of reactive oxygen species (ROS) and redox signaling. And genetic variations in TXNRD1 favor the development of Drug-induced liver

injury (DILI), which is the most common adverse drug reaction.

Reference

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Choudhary C., et al., 2009, Science 325:834-840.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481