

[Go to Product page](#)

Datasheet for ABIN3130390

**TXNRD1 Protein (AA 1-613) (Strep Tag)**

## Overview

Quantity:	250 µg
Target:	TXNRD1
Protein Characteristics:	AA 1-613
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TXNRD1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

## Product Details

Brand:	AliCE®
Sequence:	MPVDDCWLYF PASRGRTFVQ TVWVAPTCPN CCWFPGFLPP VPRPPHVPRV LLRGPRGAVL PASRPSKTLF SSSQTPCPTD PCICPPPSTP DSRQEKNTQS ELPNKKGQLQ KLPTMNGSKD PPGSYDFDLI IIGGGSGGLA AAKEAAKFDK KVLVLDVFTP TPLGTRWGLG GTCVNVGCIP KKLMHQAALL GQALKDSRNY GWKVEDTVKH DWEKMTESVQ SHIGSLNWGY RVALREKKVV YENAYGRFIG PHRIVATNNK GKEKIYSAER FLIATGERPR YLGIPGDKEY CISSDDLFSL PYCPGKTLVV GASVVALECA GFLAGIGLDV TVMVRSILLR GFDQDMANKI GEHMEEHGIK FIRQFVPTKI EQIEAGTPGR LRVTAQSTNS EETIEGEFNT VLLAVGRDSC TRTIGLETVG VKINEKTGKI PVTDEEQTNV PYYAIGDIL EGKLELTPVA IQAGRLLAQR LYGGSNVKCD YDNVPTTVFT PLEYGCCGLS EEKAVEKFGE ENIEVYHSFF WPLEWTVPSR DNNKCYAKII CNLKDDERVV GFHVLGPNAG EVTQGFAAAL KCGLTKQQLD STIGIHPVCA EIFTTLSVTK RSGGDILQSG CUG

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

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Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

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Purity:

> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

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## Product Details

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Grade: custom-made

## Target Details

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Target: TXNRD1

Alternative Name: Txnrd1 ([TXNRD1 Products](#))

Background: Thioredoxin reductase 1, cytoplasmic (TR) (EC 1.8.1.9) (Peroxidase TXNRD1) (EC 1.11.1.2) (Thioredoxin reductase TR1),FUNCTION: Reduces disulfideprotein thioredoxin (Trx) to its dithiol-containing form. Homodimeric flavoprotein involved in the regulation of cellular redox reactions, growth and differentiation. Contains a selenocysteine residue at the C-terminal active site that is essential for catalysis. Also has reductase activity on hydrogen peroxide (H2O2). {ECO:0000250|UniProtKB:Q16881}.

Molecular Weight: 67.1 kDa

UniProt: [Q9JMH6](#)

Pathways: [Regulation of Lipid Metabolism by PPARalpha](#), [Regulation of Carbohydrate Metabolic Process](#), [Cell RedoxHomeostasis](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

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Restrictions: For Research Use only

## Handling

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Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months