

Datasheet for ABIN3096099

TXNRD1 Protein (AA 1-649) (Strep Tag)



[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	TXNRD1
Protein Characteristics:	AA 1-649
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TXNRD1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MGCAEGKAVA AAPTELQTK GKNGDGRRRS AKDHHPGKTL PENPAGFTST ATADSRALLQ
 AYIDGHSVVI FSRSTCTRCT EVKKLFKSLC VPYFVLELDQ TEDGRALEGT LSELAAETDL
 PVVFKQRKI GGHGPTLKAY QEGR LQKLLK MNGPEDLPKS YDYLIIIGG GSGGLAAAKE
 AAQYGKKVMV LDFVTPTPLG TRWGLGGTCV NVGCIPKKLM HQAALLGQAL QDSRNYGWKV
 EETVKHDWDR MIEAVQNHIG SLNWGYRVAL REKKVYENA YGQFIGPHRI KATNNKGKEK
 IYSAERFLIA TGERPRYLG I PGDKEYCISS DDLFSLPYCP GKTLVVGASY VALECAGFLA
 GIGLDVTVMV RSILLRGFDQ DMANKIGEHEM EEHGIKFIRQ FVPIKVEQIE AGTPGRLRVV
 AQSTNSEEII EGEYNTVMLA IGRDACTRKI GLETVGVKIN EKTGKIPVTD EEQTNVPYIY
 AIGDILEDKV ELTPVAIQAG RLLAQRLYAG STVKCDYENV PTTVFTPLEY GACGLSEEKA
 VEKFGEENIE VYHSYFWPLE WTIPSRDNNK CYAKIICNTK DNERVVG FHV LGPNAGEVTQ
 GFAAALKCGL TTKQLDSTIG IHPVCAEVFT TLSVTKRSGA SILQAGCUG

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.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag

Product Details

- capture material. Eluate fractions are analyzed by SDS-PAGE.
2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.

Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	TXNRD1
Alternative Name:	TXNRD1 (TXNRD1 Products)
Background:	<p>Thioredoxin reductase 1, cytoplasmic (TR) (EC 1.8.1.9) (Gene associated with retinoic and interferon-induced mortality 12 protein) (GRIM-12) (Gene associated with retinoic and IFN-induced mortality 12 protein) (KM-102-derived reductase-like factor) (Peroxidase TXNRD1) (EC 1.11.1.2) (Thioredoxin reductase TR1),FUNCTION: Reduces disulfideprotein thioredoxin (Trx) to its dithiol-containing form (PubMed:8577704). 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 (Probable). Also has reductase activity on hydrogen peroxide (H2O2) (PubMed:10849437). {ECO:0000269 PubMed:10849437, ECO:0000269 PubMed:8577704, ECO:0000305 PubMed:17512005}., FUNCTION: [Isoform 1]: Induces actin and tubulin polymerization, leading to formation of cell membrane protrusions. {ECO:0000269 PubMed:18042542, ECO:0000269 PubMed:8577704}., FUNCTION: [Isoform 4]: Enhances the transcriptional activity of estrogen receptors ESR1 and ESR2. {ECO:0000269 PubMed:15199063}., FUNCTION: [Isoform 5]: Enhances the transcriptional activity of the estrogen receptor ESR2 only (PubMed:15199063). Mediates cell death induced by a combination of interferon-beta and retinoic acid (PubMed:9774665). {ECO:0000269 PubMed:15199063, ECO:0000269 PubMed:9774665}.</p>
Molecular Weight:	70.9 kDa
UniProt:	Q16881
Pathways:	Regulation of Lipid Metabolism by PPARalpha , Regulation of Carbohydrate Metabolic Process , Cell RedoxHomeostasis

Application Details

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
----------	--

Restrictions:	For Research Use only
---------------	-----------------------

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process