

Datasheet for ABIN3073736

## TBX3 Protein (AA 1-743) (Strep Tag)



[Go to Product page](#)

### Overview

Quantity:	250 µg
Target:	TBX3
Protein Characteristics:	AA 1-743
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This TBX3 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

### Product Details

Brand:	AliCE®
Sequence:	<p>MSLSMRDPVI PGTSMAYHPF LPHRAPDFAM SAVLGHQPPF FPALTLPNG AAALSLPGAL</p> <p>AKPIMDQLVG AAETGIPFSS LGPQAHLRPL KTMEPEEEVE DDPKVHLEAK ELWDQFHKRG</p> <p>TEMVITKSGR RMFPPFKVRC SGLDKKAKYI LLMDIIAADD CRYKFHNSRW MVAGKADPEM</p> <p>PKRMYIHPDS PATGEQWMSK VVTFHKLKLT NNISDKHGFT LAFPSDHATW QGNYSFGTQT</p> <p>ILNSMHKYQP RFHIVRANDI LKLPYSTFRT YLPETEFIA VTAYQNDKIT QLKIDNNPFA</p> <p>KGFRDTGNR REKRKQLTLQ SMRVFDERHK KENGTSDESS SEQAAFNCFA QASSPAASTV</p> <p>GTSNLKDLCP SEGESDAEAE SKEEHGPEAC DAAKISTTTS EEPCKDKGSP AVKAHLFAAE</p> <p>RPRDSGRLDK ASPDSRHSPA TISSSTRGLG AEERRSPVRE GTAPAKVEEA RALPGKEAFA</p> <p>PLTVQTDAAA AHLAQGPLPG LGFAPGLAGQ QFFNGHPLFL HPSQFAMGGA FSSMAAAGMG</p> <p>PLLATVSGAS TGVSGLDSTA MASAAAAQGL SGASAATLPF HLQQHVLASQ GLAMSPFGSL</p> <p>FPYPYTYMAA AAAASSAAAS SSVHRHPFLN LNTMRPRLRY SPYSIPVPVP DGSSLLTTAL</p>

PSMAAAAGPL DGKVAALAAS PASVAVDSGS ELNSRSSTLS SSSMSLSPKL CAEKEAATSE  
LQSIQRLVSG LEAKPDRSRS ASP

**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.

### Purification:

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

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## Product Details

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

Grade: custom-made

## Target Details

Target: TBX3

Alternative Name: TBX3 ([TBX3 Products](#))

Background: T-box transcription factor TBX3 (T-box protein 3),FUNCTION: Transcriptional repressor involved in developmental processes (PubMed:10468588). Binds to the palindromic T site 5'-TTCACACCTAGGTGTGAA-3' DNA sequence, or a half-site, which are present in the regulatory region of several genes (PubMed:12000749). Probably plays a role in limb pattern formation (PubMed:10468588). Required for mammary placode induction, and maintenance of the mammary buds during development (By similarity). Involved in branching morphogenesis in both developing lungs and adult mammary glands, via negative modulation of target genes, acting redundantly with TBX2 (By similarity). Required, together with TBX2, to maintain cell proliferation in the embryonic lung mesenchyme, perhaps acting downstream of SHH, BMP and TGFbeta signaling (By similarity). Involved in modulating early inner ear development, acting independently of, and also redundantly with, TBX2 in different subregions of the developing ear (By similarity). Acts as a negative regulator of PML function in cellular senescence (PubMed:22002537). {ECO:0000250|UniProtKB:P70324, ECO:0000269|PubMed:10468588, ECO:0000269|PubMed:12000749, ECO:0000269|PubMed:22002537}.

Molecular Weight: 79.4 kDa

UniProt: [O15119](#)

Pathways: [Hormone Transport](#), [Stem Cell Maintenance](#), [Regulation of Muscle Cell Differentiation](#), [Skeletal Muscle Fiber Development](#)

## 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: 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

Application Details

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!

Restrictions: For Research Use only

Handling

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