



[Go to Product page](#)

Datasheet for ABIN3094494
PBX1 Protein (AA 1-430) (Strep Tag)

Overview

Quantity:	1 mg
Target:	PBX1
Protein Characteristics:	AA 1-430
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PBX1 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MDEQPRLMHS HAGVMAGHP GLSQHLQDGA GGTEGEGGRK QDIGDILQI MTITDQSLDE
AQARKHALNC HRMKPALFNV LCEIKEKTVL SIRGAQEEEP TDPQLMRLDN MLLAEGVAGP
EKGGGSAAAA AAAAASGGAG SDNSVEHSDY RAKLSQIRQI YHTELEKYEQ ACNEFTTHVM
NLLREQSRTR PISPKEIERM VSIIHRKFSS IQMQLKQSTC EAVMILRSRF LDARRKRRNF
NKQATEILNE YFYSHLSNPY PSEEAKEELA KKCGITVSQV SNWFGNKRIR YKKNIGKFQE
EANIYAAKTA VTATNVAHG SQANSPSTPN SAGSSSSFNM SNSGDLFMSV QSLNGDSYQG
AQVGANVQSQ VDTLRHVISQ TGGYSDGLAA SQMYSPPGIS ANGGWQDATT PSSVTSPTEG
PGSVHSDTSN

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 Exspasy'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 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.

Product Details

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)

Target Details

Target: PBX1

Alternative Name: PBX1 ([PBX1 Products](#))

Background: Pre-B-cell leukemia transcription factor 1 (Homeobox protein PBX1) (Homeobox protein PRL),FUNCTION: Transcription factor which binds the DNA sequence 5'-TGATTGAT-3' as part of a heterodimer with HOX proteins such as HOXA1, HOXA5, HOXB7 and HOXB8 (PubMed:9191052). Binds to the DNA sequence 5'-TGATTGAC-3' in complex with a nuclear factor which is not a class I HOX protein (PubMed:9191052). Has also been shown to bind the DNA sequence 5'-ATCAATCAA-3' cooperatively with HOXA5, HOXB7, HOXB8, HOXC8 and HOXD4 (PubMed:8327485, PubMed:7791786). Acts as a transcriptional activator of PF4 in complex with MEIS1 (PubMed:12609849). Also activates transcription of SOX3 in complex with MEIS1 by binding to the 5'-TGATTGAC-3' consensus sequence (By similarity). In natural killer cells, binds to the NFIL3 promoter and acts as a transcriptional activator of NFIL3, promoting natural killer cell development (By similarity). Plays a role in the cAMP-dependent regulation of CYP17A1 gene expression via its cAMP-regulatory sequence (CRS1) (By similarity). Probably in complex with MEIS2, involved in transcriptional regulation by KLF4 (PubMed:21746878). Acts as a transcriptional activator of NKX2-5 and a transcriptional repressor of CDKN2B (By similarity). Together with NKX2-5, required for spleen development through a mechanism that involves CDKN2B repression (By similarity). {ECO:0000250|UniProtKB:P41778, ECO:0000269|PubMed:12609849, ECO:0000269|PubMed:21746878, ECO:0000269|PubMed:7791786, ECO:0000269|PubMed:8327485, ECO:0000269|PubMed:9191052},, FUNCTION: [Isoform PBX1b]: As part of a PDX1:PBX1b:MEIS2B complex in pancreatic acinar cells, is involved in the transcriptional activation of the ELA1 enhancer, the complex binds to the enhancer B element and cooperates with the transcription factor 1 complex (PTF1) bound to the enhancer A element. {ECO:0000250|UniProtKB:P41778}.

Molecular Weight: 46.6 kDa

UniProt: [P40424](#)

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 modifications.

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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)
