

Datasheet for ABIN3092256

## DYRK1B Protein (AA 1-629) (Strep Tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	DYRK1B
Protein Characteristics:	AA 1-629
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This DYRK1B protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

#### Product Details

Sequence: MAVPPGHGPF SGFPGPQEHT QVLPDVRLLP RRLPLAFRDA TSAPLRKLSV DLIKTYKHIN  
EVYYAKKKRR AQQAPPQDSS NKKEKKVLNH GYDDDNHDYI VRSGERWLER YEIDSLIGKG  
SFGQVVKAYD HQTQELVAIK IKNKKAFLN QAQIELRLLE LMNQHDTEMK YYIVHLKRHF  
MFRNHLCLVF ELLSYNLYDL LRNTHFRGVS LNLTRKLAQQ LCTALLFLAT PELSIIHCDL  
KPENILLCNP KRSAIKIVDF GSSCQLGQRI YQYIQSRFYR SPEVLLGTPY DLAIMMWSLG  
CILVEMHTGE PLFSGSNEVD QMNRIVEVLG IPPAAMLDA PKARKYFERL PGGGWTLRRT  
KELRKDYQGP GTRRLQEVLG VQTGGPGGRR AGEPGHSPAD YLRFQDLVLR MLEYEPAARI  
SPLGALQHGF FRRTADEATN TGPAGSSAST SPAPLDTCPSS STASSISSS GGSSGSSSDN  
RTYRYSNRYC GPGPPITDC EMNSPQVPPS QPLRPWAGGD VPHKTHQAPA SASSLPGTGA  
QLPPQPRYLGRPPSPTSPPP PELMDVSLVG GPADCSPHP APAPQHPAAS ALRTRMTGGR  
PPLPPDDPA TLGPHLGLRG VPQSTAASS

**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 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
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## Product Details

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- 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

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Target: DYRK1B

Alternative Name: DYRK1B ([DYRK1B Products](#))

Background: Dual specificity tyrosine-phosphorylation-regulated kinase 1B (EC 2.7.12.1) (Minibrain-related kinase) (Mirk protein kinase),FUNCTION: Dual-specificity kinase which possesses both serine/threonine and tyrosine kinase activities. Plays an essential role in ribosomal DNA (rDNA) double-strand break repair and rDNA copy number maintenance (PubMed:33469661). During DNA damage, mediates transcription silencing in part via phosphorylating and enforcing DSB accumulation of the histone methyltransferase EHMT2 (PubMed:32611815). Enhances the transcriptional activity of TCF1/HNF1A and FOXO1. Inhibits epithelial cell migration. Mediates colon carcinoma cell survival in mitogen-poor environments. Inhibits the SHH and WNT1 pathways, thereby enhancing adipogenesis. In addition, promotes expression of the gluconeogenic enzyme glucose-6-phosphatase catalytic subunit 1 (G6PC1).  
{ECO:0000269|PubMed:10910078, ECO:0000269|PubMed:11980910, ECO:0000269|PubMed:14500717, ECO:0000269|PubMed:24827035, ECO:0000269|PubMed:33469661}.

Molecular Weight: 69.2 kDa

UniProt: [Q9Y463](#)

## 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

## Application Details

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*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!

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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. 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)

## Images

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