

Datasheet for ABIN3137490

## PHF2 Protein (AA 1-1096) (Strep Tag)



[Go to Product page](#)

### Overview

Quantity:	250 µg
Target:	PHF2
Protein Characteristics:	AA 1-1096
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PHF2 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Brand:	AliCE®
Sequence:	<p>MATVPVYCVC RLPYDVTRFM IECDAKDW F HGSCVGVEEE EAPDIDIYHC PNCEKTHGKS</p> <p>TLKKKRTWHK HPGGPTPDVK PVQNGSQLFI KELRSRTFPS AEDVVS RVPG SQLTVGYMEE</p> <p>HGFTEPILVP KKDGLGLAVP APTFYVSDVE NYVGPERSDV VTDVTKQKDC KMKLKEFVDY</p> <p>YYSTNRKRVL NVTNLEFSDT RMSSFVEPPD IVKKLSWVEN YWPDDALLAK PKVTKYCLIC</p> <p>VKDSYTD FHI DSGGASAWYH VLKGEKIFYL IRPASANISL YERWRSASN H SEMFFADQVD</p> <p>RCYKCTVKQG QTLFIPSGWI YATLTPVDCL AFAGHFLHSL SVEMQMRAYE VERRLKLGS L</p> <p>TQFPNFETAC WYMGKHLLEA FKGSHKSGKQ LPPHLVQGAK ILNGAFRSWT KKQALAEHED</p> <p>ELPEHFRPSQ LIKDLAKEIR LSENASKTVR PEVNAAASSD EVCDGDREKE EPPSPVETTP</p> <p>PRSLLEK VSK KKTSKTVKMP KPSKIPKPPK SPKPPKTLKL KDGSKKKGKK CKESASPTIP</p> <p>NLDLLEAHTK EALT KMEPPK KGKTPKSVLS VPNKDTVHTQ NDMERLEIRE QTKSKSEAKW</p> <p>KYKNSKPSDL LKMEEEQRL E KSPLAGNKDK FSFSFSNRKL LGSKALRPPS SPGVFGALQS</p>

FKEDKAKPVR DEYEYVSDDG ELKIDFPIR RKKSAPKRD L SFLLDKKEAL LMPTSKPKLD  
SAVYKSDSS DEGLHIDTD TKPGRNAKVK KESGSSAAGI LDLLQASEEV GALEYNPN SQ  
PPASPSTQEA IQGMLSMANL QASDCLQTT WGTGQAKGGS LAAHGARKIG GGNKGTGKRL  
LKRTAKNSVD LEDYEEQDHL DACFKDSYV YPSLESDEN PVFKSRSKKR KGSDDAPYSP  
TARVGPSVPR QDRPVREGTR VASIEGLAA AAKLSQEE QKNRKKKNTK RKPAPNTASP  
SISTSASAST GTTSASTTPA STTPASTTPA STTPASTSTA SSQASQEGSS PEPPPESSH  
SLADHEYTAA GTFSGSQAGR ASQPMAPGVF LTQRRPSASS PNNTAAKGKR TKKGMATAKQ  
RLGKILKIHR NGKLLL

**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 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:

## Product Details

- 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®).

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

Grade: custom-made

## Target Details

Target: PHF2

Alternative Name: Phf2 ([PHF2 Products](#))

Background: Lysine-specific demethylase PHF2 (EC 1.14.11.-) (GRC5) (PHD finger protein 2),FUNCTION: Lysine demethylase that demethylates both histones and non-histone proteins (PubMed:22921934). Enzymatically inactive by itself, and becomes active following phosphorylation by PKA: forms a complex with ARID5B and mediates demethylation of methylated ARID5B. Demethylation of ARID5B leads to target the PHF2-ARID5B complex to target promoters, where PHF2 mediates demethylation of dimethylated 'Lys-9' of histone H3 (H3K9me2), followed by transcription activation of target genes. The PHF2-ARID5B complex acts as a coactivator of HNF4A in liver. PHF2 is recruited to trimethylated 'Lys-4' of histone H3 (H3K4me3) at rDNA promoters and promotes expression of rDNA (By similarity). Involved in the activation of toll-like receptor 4 (TLR4)-target inflammatory genes in macrophages by catalyzing the demethylation of trimethylated histone H4 lysine 20 (H4K20me3) at the gene promoters (PubMed:22921934). {ECO:0000250|UniProtKB:O75151, ECO:0000269|PubMed:22921934}.

Molecular Weight: 120.8 kDa

UniProt: [Q9WTU0](#)

## 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.

## Application Details

---

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