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Datasheet for ABIN3094614

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

1 Image

Overview

Quantity:	1 mg
Target:	PHF2
Protein Characteristics:	AA 1-1096
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PHF2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MATVPVYVCV RLPYDVTRFM IEC DACKDWF HGSCVGV EEE EAPDIDIYHC PNCEKTHGKS
TLKKRTWHK HGPGQAPDVK PVQNGSQLFI KELRSRTFPS AEDVVARVPG SQLTLGYMEE
HGFTEPILVP KKDGLGLAVP APTFYVSDVE NYVGPERVSD VTDVTKQKDC KMKLKEFVDY
YYSTNRKRVL NVTNLEFSDT RMSSFVEPPD IVKKLSWVEN YWPDDALLAK PKVTKYCLIC
VKDSYTD FHI DSGGASAWYH VLKGEKTFYL IRPASANISL YERWRSASNH SEMFFADQVD
KCYKCIKQG QTLFIPSGWI YATLTPVDCL AFAGHFLHSL SVEMQM RAYE VERRLKL GSL
TQFPNFETAC WYMGKHLLEA FKGSHKSGKQ LPPHLVQGAK ILNGAFRSWT KKQALAEHED
ELPEHFKPSQ LIKDLAKEIR LSENASKAVR PEVNTVASSD EVCDGDREKE EPPSPIEATP
PQSLLEK VSK KKTPKTVKMP KPSKIPKPPK PPKPPRPPKT LKLKDG GKKK GKKSRESASP
TIPNLDLLEA HTKEALTKME PPKKGKATKS VLSVPNKDVV HMQNDVERLE IREQTKSKSE
AKWKYKNSKP DSLLKMEEEQ KLEKSPLAGN KDNKFSFSFS NKKLLGSKAL RPPTSPGVFG
ALQNFKEDKP KPVRDEYEVV SDDGELKIDE FPIRRKKNAP KRDLSFLLDK KAVLPTPVTK

PKLDSAAYKS DDSSDEGLH IDTDTPGRN ARVKKESGSS AAGILLQA SEEVGALEYN
PSSQPPASPS TQEAIQGMLS MANLQASDSC LQTTWGAGQA KGSSLAHGA RKNNGGSGKS
AGKRLKRAA KNSVDLDDYE EEQDHLDACF KDSDYVYPSL ESDENPIFK SRSKRRKGS
DAPYSPTARV GPSVPRQDRP VREGTRVASI ETGLAAAAAK LSQEEQKSK KKKSAKRKLT
PNTTSPSTST SISAGTTSTS TTPASTTPAS TTPASTSTAS SQASQEGSSP EPPESHSSS
LADHEYTAAG TFTGAQAGRT SQPMAPGVFL TQRRPSASSP NNNTAAKGKR 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 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:

Product Details

- 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®): <ol style="list-style-type: none">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.
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:	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:20129925, PubMed:21167174, PubMed:21532585). Enzymatically inactive by itself, and becomes active following phosphorylation by PKA: forms a complex with ARID5B and mediates demethylation of methylated ARID5B (PubMed:21532585). 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 (PubMed:21532585). 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 (PubMed:21532585). 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 (By similarity). {ECO:0000250 UniProtKB:Q9WTU0, ECO:0000269 PubMed:20129925, ECO:0000269 PubMed:21167174, ECO:0000269 PubMed:21532585}.

Target Details

Molecular Weight: 120.8 kDa

UniProt: [O75151](#)

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.

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. 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