

Datasheet for ABIN3135969

## PIF1 Protein (AA 1-650) (Strep Tag)



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### Overview

Quantity:	250 µg
Target:	PIF1
Protein Characteristics:	AA 1-650
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIF1 protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Brand:	AlIcE®
Sequence:	<p>MRSGLCTPAE ALEMPSSTEA ATDECDDAEL RCRVAVEELS PGGQPRKRQA LRAAELSLGR  NERREMLRL QAPGPTGRPR CFPLRAVRLF TRFAATGRST LRLPTDGVPG AGSVQLLLSD  CPPERLRRFL RTLRLKLAVA PGPGPASARA QLLGPRPRDF VTISPVQPEE LQRAAATKAP  DSALEKRPME SQTSTEAPRW PLPVKKLRMP STKPKLSEEQ AAVLRMVLKG QSIFFTGSAG  TGKSYLLKHI LGSLPPTGTV ATASTGVAAC HIGGTTLHAF AGIGSGQAPL AQCMALANRP  GVRQGWLNQC RLVIDEISMV EADFFDKLEA VARAVRQKK PFGGIQLIIC GDFLQLPPVT  KGSQQPQFCF QAKSWRRCVP VILELTVWR QADQTFISLL QAVRLGRCS D EVTRQLRATA  AHKVGRDGIV ATRLCTHQDD VALTNEKW LK ALPGDVHSFE AIDSDPELSR TLDAQCPVSR  VLQLKLGAQV MLVKNLAVSR GLVNGARGVV VGFESEGRGL PRVRFLCGIT EVIRTDRTV  QVTGGQYLSR QQLPLQLAWA ISIHKSQGMS LDCVEISLGR VFASGQAYVA LSRARSLQGL  RVLDFDPTVV RCDSRVLHFY ATLRQGRGLS LESQDDEEAN SDLENMDPNL</p>

**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.

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### Purification:

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

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### Purity:

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

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## Product Details

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Grade: custom-made

## Target Details

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Target: PIF1

Alternative Name: Pif1 ([PIF1 Products](#))

Background: ATP-dependent DNA helicase PIF1 (EC 3.6.4.12) (DNA repair and recombination helicase PIF1) (Pif1/Rrm3 DNA helicase-like protein),FUNCTION: DNA-dependent ATPase and 5'-3' DNA helicase required for the maintenance of both mitochondrial and nuclear genome stability. Efficiently unwinds G-quadruplex (G4) DNA structures and forked RNA-DNA hybrids. Resolves G4 structures, preventing replication pausing and double-strand breaks (DSBs) at G4 motifs. Involved in the maintenance of telomeric DNA. Inhibits telomere elongation, de novo telomere formation and telomere addition to DSBs via catalytic inhibition of telomerase. Reduces the processivity of telomerase by displacing active telomerase from DNA ends. Releases telomerase by unwinding the short telomerase RNA/telomeric DNA hybrid that is the intermediate in the telomerase reaction. Possesses an intrinsic strand annealing activity. {ECO:0000255|HAMAP-Rule:MF\_03176}.

Molecular Weight: 70.9 kDa

UniProt: [Q80SX8](#)

## 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.

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Application Details

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