

Datasheet for ABIN3135969 PIF1 Protein (AA 1-650) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	PIF1
Protein Characteristics:	AA 1-650
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIF1 protein is labelled with His tag.
Application:	ELISA, Crystallization (Crys), SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MRSGLCTPAE ALEMPSSTEA ATDECDDAEL RCRVAVEELS PGGQPRKRQA LRAAELSLGR
 NERREMLRL QAPGPTGRPR CFPLRAVRLF TRFAATGRST LRLPTDGVPG AGSVQLLLSD
 CPPERLRRFL RTLRLKLAVA PGP GPASARA QLLGPRPRDF VTISPVQPEE LQRAAATKAP
 DSALEKRPME SQTSTEAPRW PLPVKKLRMP STKPKLSEEQ AAVLRMVLKG QSIFFTGSAG
 TGKSYLLKHI LGSLPPTGTV ATASTGVAAC HIGGTTLHAF AGIGSGQAPL AQCMALANRP
 GVRQGWLNQ RLVIDEISMV EADFFDKLEA VARAVRQQKK PFGGIQLIIC GDFLQLPPVT
 KGSQQPQFCF QAKSWRRCVP VILELTEVWR QADQTFISLL QAVRLGRCS D EVTRQLRATA
 AHKVGRDGIV ATRLCTHQDD VALTNEKW LK ALPGDVHSFE AIDSDPELSR TLDAQCPVSR
 VLQLKLGAQV MLVKNLAVSR GLVNGARGVV VGFESEGRGL PRVRFLCGIT EVIRTDRTV
 QVTGGQYLSR QQLPLQLAWA ISIHKSQGMS LDCVEISLGR VFASGQAYVA LSRARSLQGL
 RVLDFDPTVV RCDSRVLFHY ATRLRQGRGLS LESQDDEEAN SDLENMDPNL

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a

special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Pif1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Grade:

Crystallography grade

Target Details

Target:	PIF1
Alternative Name:	Pif1 (PIF1 Products)
Background:	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:	71.9 kDa Including tag.
UniProt:	Q80SX8

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:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
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