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Datasheet for ABIN3094576
PIAS1 Protein (AA 2-651) (His tag)

Overview

Quantity:	1 mg
Target:	PIAS1
Protein Characteristics:	AA 2-651
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This PIAS1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence: ADSAELKQMV MSLRVSELQV LLGYAGRNKH GRKHELLTKA LHLLKAGCSP AVQMKIKELY
RRRFPQKIMT PADLSIPNVH SSPMPATLSP STIPQLTYDG HPASSPLLPV SLLGPKHELE
LPHLTSALHP VHPDIKLQKL PFYDLLDELI KPTSLASDNS QRFRETCAFALTPQQVQQI
SSSMDISGTK CDFTVQVQLR FCLSETSCPQ EDHFPPNLCV KVNTKPCSLP GYLPPTKNGV
EPKRPSRPIN ITSLVRLSTT VPNTIVVSWT AEIGRNYSMA VYLVKQLSST VLLQRLRAKG
IRNPDHSRAL IKEKLTADPD SEIATTSRLV SLLCPLGKMR LTIPCRALTC SHLQCFDRTL
YIQMNEKKPT WPCVCDKKA PYEHLIIDGL FMEILKYCTD CDEIQFKEDG TWAPMRSKKE
VQEVASASYNG VDGCLSSTLE HQVASHHQSS NKNKKVEVID LTIDSSSDEE EEEPSAKRTC
PSLSPTSPLN NKGILSLPHQ ASPVSRTPSL PAVDTSYINT SLIQDYRHPF HMTMPYDLQ
GLDFFPFLSG DNQHYNTSLL AAAAAVSDD QDLLHSSRFF PYTSSQMFLD QLSAGGSTSL
PTTNGSSSGS NSSLVSSNSL RESHSHTVTN RSSTDTASIF GIIPDIISLD

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.
- Human PIAS1 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:	PIAS1
Alternative Name:	PIAS1 (PIAS1 Products)
Background:	<p>Functions as an E3-type small ubiquitin-like modifier (SUMO) ligase, stabilizing the interaction between UBE2I and the substrate, and as a SUMO-tethering factor. Plays a crucial role as a transcriptional coregulation in various cellular pathways, including the STAT pathway, the p53 pathway and the steroid hormone signaling pathway. In vitro, binds A/T-rich DNA. The effects of this transcriptional coregulation, transactivation or silencing, may vary depending upon the biological context. Together with PRMT1, may repress STAT1 transcriptional activity, in the late phase of interferon gamma (IFN-gamma) signaling. Sumoylates PML (at'Lys-65' and 'Lys-160') and PML-RAR and promotes their ubiquitin-mediated degradation. PIAS1-mediated sumoylation of PML promotes its interaction with CSNK2A1/CK2 which in turn promotes PML phosphorylation and degradation (By similarity). Enhances the sumoylation of MTA1 and may participate in its paralog-selective sumoylation. Plays a dynamic role in adipogenesis by promoting the SUMOylation and degradation of CEBPB (By similarity).</p> <p>{ECO:0000250 UniProtKB:O88907, ECO:0000269 PubMed:14500712, ECO:0000269 PubMed:19136629, ECO:0000269 PubMed:21965678}.</p>
Molecular Weight:	72.7 kDa Including tag.
UniProt:	O75925
Pathways:	JAK-STAT Signaling , Interferon-gamma Pathway , Intracellular Steroid Hormone Receptor Signaling Pathway , Regulation of Muscle Cell Differentiation , Hepatitis C

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:	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)