

Datasheet for ABIN3094674
PML Protein (AA 1-882) (Strep Tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	PML
Protein Characteristics:	AA 1-882
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This PML protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MEPAPARSPR PQQDPARPQE PTMPPPETPS EGRQPSPSPS PTERAPASEE EFQFLRCQQC QAEAKCPKLL PCLHTLCSGC LEASGMQCPI CQAPWPLGAD TPALDNVFFE SLQRRLSVYR QIVDAQAVCT RCKESADFWC FECEQLLCAK CFEAHQWFLK HEARPLAELR NQSVREFLDG TRKTNNIFCS NPNHRTPTLT SIYCRGCSKP LCCSCALLDS SHSELKCDIS AEIQQRQEEL DAMTQALQEQ DSAFGAVHAQ MHAAVGQLGR ARAETEELIR ERVRQVVAHV RAQERELLEA VDARYQRDYE EMASRLGRLD AVLQRIRTGS ALVQRMKCYA SDQEVLDMHG FLRQALCRLR QEEPQSLQAA VRTDGFDEFK VRLQDLSSCI TQGKDAAVSK KASPEAASTP RDPIDVDLPE EAERVKAQVQ ALGLAEQPM AVVQSVPGAH PVPVYAFSIK GPSYGEDVSN TTTAQKRKCS QTQCPRKVIK MESEEGKEAR LARSSPEQPR PSTSKAVSPP HLDGPPSPRS PVIGSEVFLP NSNHVASGAG EAEERVVIS SSEDSDAENS SSRELDSSS ESSDLQLEGP STLRVLDENL ADPQAEDRPL VFFDLKIDNE TQKISQLAAV NRESKFRVVI QPEAFFSIYS KAVSLEVGLQ HFLSFLSSMR RPILACYKLW GPGLPNFFRA LEDINRLWEF QEASIGFLAA LPLIRERVPG
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ASSFKLKNLA QTYLARNMSE RSAMAAVLAM RDLCLLLEVS PGPQLAQHVY PFSSLQCFAS
LQPLVQAAVL PRAEARLLAL HNVSMFELLS AHRDRQGGGL KKYSRYLSLQ TTLPPAQPA
FNLQALGTYF EGLLEGPALA RAEGVSTPLA GRGLAERASQ QS

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:

- 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.

Product Details

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 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:	PML
Alternative Name:	PML (PML Products)
Background:	<p>Protein PML (E3 SUMO-protein ligase PML) (EC 2.3.2.-) (Promyelocytic leukemia protein) (RING finger protein 71) (RING-type E3 SUMO transferase PML) (Tripartite motif-containing protein 19) (TRIM19),FUNCTION: Functions via its association with PML-nuclear bodies (PML-NBs) in a wide range of important cellular processes, including tumor suppression, transcriptional regulation, apoptosis, senescence, DNA damage response, and viral defense mechanisms. Acts as the scaffold of PML-NBs allowing other proteins to shuttle in and out, a process which is regulated by SUMO-mediated modifications and interactions. Inhibits EIF4E-mediated mRNA nuclear export by reducing EIF4E affinity for the 5' 7-methylguanosine (m7G) cap of target mRNAs (PubMed:11500381, PubMed:11575918, PubMed:18391071). Isoform PML-4 has a multifaceted role in the regulation of apoptosis and growth suppression: activates RB1 and inhibits AKT1 via interactions with PP1 and PP2A phosphatases respectively, negatively affects the PI3K pathway by inhibiting MTOR and activating PTEN, and positively regulates p53/TP53 by acting at different levels (by promoting its acetylation and phosphorylation and by inhibiting its MDM2-dependent degradation). Isoform PML-4 also: acts as a transcriptional repressor of TBX2 during cellular senescence and the repression is dependent on a functional RBL2/E2F4 repressor complex, regulates double-strand break repair in gamma-irradiation-induced DNA damage responses via its interaction with WRN, acts as a negative regulator of telomerase by interacting with TERT, and regulates PER2 nuclear localization and circadian function. Isoform PML-6 inhibits specifically the activity of the tetrameric form of PKM. The nuclear isoforms (isoform PML-1, isoform PML-2, isoform PML-3, isoform PML-4 and isoform PML-5) in concert</p>

with SATB1 are involved in local chromatin-loop remodeling and gene expression regulation at the MHC-I locus. Isoform PML-2 is required for efficient IFN-gamma induced MHC II gene transcription via regulation of CIITA. Cytoplasmic PML is involved in the regulation of the TGF-beta signaling pathway. PML also regulates transcription activity of ELF4 and can act as an important mediator for TNF-alpha- and IFN-alpha-mediated inhibition of endothelial cell network formation and migration. {ECO:0000269|PubMed:11500381, ECO:0000269|PubMed:11575918, ECO:0000269|PubMed:18391071}., FUNCTION: Exhibits antiviral activity against both DNA and RNA viruses. The antiviral activity can involve one or several isoform(s) and can be enhanced by the permanent PML-NB-associated protein DAXX or by the recruitment of p53/TP53 within these structures. Isoform PML-4 restricts varicella zoster virus (VZV) via sequestration of virion capsids in PML-NBs thereby preventing their nuclear egress and inhibiting formation of infectious virus particles. The sumoylated isoform PML-4 restricts rabies virus by inhibiting viral mRNA and protein synthesis. The cytoplasmic isoform PML-14 can restrict herpes simplex virus-1 (HHV-1) replication by sequestering the viral E3 ubiquitin-protein ligase ICP0 in the cytoplasm. Isoform PML-6 shows restriction activity towards human cytomegalovirus (HHV-5) and influenza A virus strains PR8(H1N1) and ST364(H3N2). Sumoylated isoform PML-4 and isoform PML-12 show antiviral activity against encephalomyocarditis virus (EMCV) by promoting nuclear sequestration of viral polymerase (P3D-POL) within PML NBs. Isoform PML-3 exhibits antiviral activity against poliovirus by inducing apoptosis in infected cells through the recruitment and the activation of p53/TP53 in the PML-NBs. Isoform PML-3 represses human foamy virus (HFV) transcription by complexing the HFV transactivator, bel1/tas, preventing its binding to viral DNA. PML may positively regulate infectious hepatitis C viral (HCV) production and isoform PML-2 may enhance adenovirus transcription. Functions as an E3 SUMO-protein ligase that sumoylates (HHV-5) immediate early protein IE1, thereby participating in the antiviral response (PubMed:20972456, PubMed:28250117). Isoforms PML-3 and PML-6 display the highest levels of sumoylation activity (PubMed:20972456, PubMed:28250117). {ECO:0000269|PubMed:20972456, ECO:0000269|PubMed:28250117}.

Molecular Weight:	97.6 kDa
UniProt:	P29590
Pathways:	p53 Signaling , Retinoic Acid Receptor Signaling Pathway , Maintenance of Protein Location , Positive Regulation of Endopeptidase Activity , Protein targeting to Nucleus

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.
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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>
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Restrictions:	For Research Use only
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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