

Datasheet for ABIN3088794

**ALPK1 Protein (AA 1-1244) (Strep Tag)**[Go to Product page](#)**1** Image

## Overview

|                               |  |
|-------------------------------|--|
| Quantity:                     | 1 mg   |
| Target:                       | ALPK1  |
| Protein Characteristics:      | AA 1-1244                                      |
| Origin:                       | Human  |
| Source:                       | Tobacco (Nicotiana tabacum)                    |
| Protein Type:                 | Recombinant                                    |
| Purification tag / Conjugate: | This ALPK1 protein is labelled with Strep Tag. |
| Application:                  | ELISA, Western Blotting (WB), SDS-PAGE (SDS)   |

## Product Details

|           |   |
|-----------|---|
| Sequence: | MNNQKVAVL LQECKQLDQ LLLEAPDVSE EDKSEDQRCR ALLPSELRTL IQEAKEMKWP<br>FVPEKWQYKQ AVGPEDKTNL KDVIGAGLQQ LLASLRASIL ARDCAAAAAI VFLVDRFLYG<br>LDVSGKLLQV AKGLHLKQPA TPIAPQVIR QARISVNSGK LLKAEYLSS LISNNGATGT<br>WLYRNESDKV LVQSVCIQIR GQILQKLGMW YEAAELIWAS IVGYLALPQP DKKGLSTSLG<br>ILADIFVSMS KNDYEKFKNN PQINLSLLKE FDHLLSAAE ACKLAAAFSA YTPLFVLTA<br>NIRGTCLLSY SSSNDCPEL KNLHLCEAKE AFEIGLLTKR DDEPVTGKQE LHSFVKAAFG<br>LTTVHRRHLG ETGTVHAASQ LCKEAMGKLY NFSTSSRSQD REALSQEVMS VIAQVKEHLQ<br>VQSFSNVDDR SYVPESFECD LDKLILHGQG DFQKILDYS QHHTSVCEVF ESDCGNNKNE<br>QKDAKTGVC I TALKTEIKNI DTVSTTQEK HCQRDTGISS SLMGKNVQRE LRRGGRNWT<br>HSDAFRVSLD QDVETETEPS DYSNGEGAVF NKSLSGSQTS SAWSNLSGFS SSASWEEVNY<br>HVDDRSARKE PGKEHLVDQ CSTALSEELE NDREGRAMHS LHSQHLDSL QEPNNDNLEP<br>SQNQPPQQMP LTPFSPHNT GIFLAPGAGL LEGAPEGIE VRNMGPRNTS AHSRPSYRSA |
|-----------|---|

SWSSDSGRPK NMGTHPSVQK EEAFEIIEVF PETNCDVKDR QGKEQGEEIS ERGAGPTFKA  
SPSWVDPEGE TAESTEDAPL DFHRVLHNSL GNISMLPCSS FTPNWPVQNP DSRKSGGPVA  
EQGIDPDAST VDEEGQLLDS MDVPCTNGHG SHRLCILRQP PGQRAETPNS SVSGNILFPV  
LSEDCTTTEE GNQPGNMLNC SQNSSSSSVW WLKSPAFSSG SSEGDSPWSY LNSSGSSWVS  
LPGKMRKEIL EARTLQPDDF EKLLAGVRHD WLFQRLNTG VFKPSQLHRA HSALLLKYSK  
KSELWTAQET IVYLG DYLT V KKKGRQRNAF WVHHLHQEEI LGRYVGKDYK EQKGLWHHFT  
DVERQMTAQH YVTEFNKRLY EQNIPTQIFY IPSTILLILE DKTIKGCISV EPYILGEFVK  
LSNNTKVVK T EYKATEYGLA YGHFSYEFSN HRDVVVDLQG WVTGNGKGLI YLTDPQIHVS  
DQKVFTTNFG KRGIFYFFNN QHVECNEICH RLSLTRPSME KPCT

**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!

Product Details

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.

|                  |  |
|------------------|--|
| Purification:    | Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):<br><br>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.<br>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:           | ALPK1  |
| Alternative Name: | ALPK1 ( <a href="#">ALPK1 Products</a> )   |
| Background:       | Alpha-protein kinase 1 (EC 2.7.11.1) (Chromosome 4 kinase) (Lymphocyte alpha-protein kinase),FUNCTION: Serine/threonine-protein kinase that detects bacterial pathogen-associated molecular pattern metabolites (PAMPs) and initiates an innate immune response, a critical step for pathogen elimination and engagement of adaptive immunity (PubMed:28877472, PubMed:28222186, PubMed:30111836). Specifically recognizes and binds ADP-D-glycero-beta-D-manno-heptose (ADP-Heptose), a potent PAMP present in all Gram-negative and some Gram-positive bacteria (PubMed:30111836). ADP-Heptose-binding stimulates its kinase activity to phosphorylate and activate TIFA, triggering pro-inflammatory NF-kappa-B signaling (PubMed:30111836). May be involved in monosodium urate monohydrate (MSU)-induced inflammation by mediating phosphorylation of unconventional myosin MYO9A (PubMed:27169898). May also play a role in apical protein transport by mediating phosphorylation of unconventional myosin MYO1A (PubMed:15883161). May play a role in ciliogenesis (PubMed:30967659). {ECO:0000269 PubMed:15883161, |

## Target Details

ECO:0000269|PubMed:27169898, ECO:0000269|PubMed:28222186,  
ECO:0000269|PubMed:28877472, ECO:0000269|PubMed:30111836,  
ECO:0000269|PubMed:30967659}.

Molecular Weight: 138.9 kDa

UniProt: [Q96QP1](#)

## 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