

Datasheet for ABIN3137649

KEAP1 Protein (AA 1-624) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	KEAP1
Protein Characteristics:	AA 1-624
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KEAP1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Brand:	AlIcE®
Sequence:	MQPEPKLSGA PRSSQFLPLW SKCPEGAGDA VMYASTECKA EVTPSQDGNR TFSYTLLEDHT KQAFGVMNEL RLSQQLCDVT LQVKYEDIPA AQFMAHKVVL ASSSPVFKAM FTNGLREQGM EVVSIIEGIHP KVMERLIEFA YTASISVGEK CVLHVMNGAV MYQIDSVVRA CSDFLVQQLD PSNAIGIANF AEQIGCTELH QRAREYIYMH FGEVAKQEEF FNLSHCQLAT LISRDDLNVR CESEVFHACI DWVKYDCPQR RFYVQALLRA VRCHALTPRF LQTQLQKCEI LQADARCKDY LVQIFQELTL HKPTQAVPCR APKVGRLIYT AGGYFRQSLS YLEAYNPSNG SWLRLADLQV PRSLAGACVV GLLYAVGGR NNSPDGNTDS SALDCYNPMT NQWSPCASMS VPRNRIGVGV IDGHIYAVGG SHGCIHHSSV ERYEPERDEW HLVAPMLTRR IGVGVAVLNR LLYAVGGFDG TNRLNSAECY YPERNEWMI TPMNTIRSGA GVCVLHNCIY AAGGYDGQDQ LNSVERYDVE TETWTFVAPM RHHRSAIGIT VHQGKIYVLG GYDGHTFLDS VECYDPDSDT WSEVTRMTSG RSGVGVAVTM EPCRKQIDQQ NCTC

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 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.

Purification:

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

Purity:

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

Product Details

Grade: custom-made

Target Details

Target: KEAP1

Alternative Name: Keap1 ([KEAP1 Products](#))

Background: Kelch-like ECH-associated protein 1 (Cytosolic inhibitor of Nrf2) (INrf2),FUNCTION: Substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complex that regulates the response to oxidative stress by targeting NFE2L2/NRF2 for ubiquitination (PubMed:9887101, PubMed:12682069, PubMed:15282312, PubMed:15367669, PubMed:15581590). KEAP1 acts as a key sensor of oxidative and electrophilic stress: in normal conditions, the BCR(KEAP1) complex mediates ubiquitination and degradation of NFE2L2/NRF2, a transcription factor regulating expression of many cytoprotective genes (PubMed:9887101, PubMed:12193649, PubMed:14764894). In response to oxidative stress, different electrophile metabolites trigger non-enzymatic covalent modifications of highly reactive cysteine residues in KEAP1, leading to inactivate the ubiquitin ligase activity of the BCR(KEAP1) complex, promoting NFE2L2/NRF2 nuclear accumulation and expression of phase II detoxifying enzymes (PubMed:12193649, PubMed:20498371, PubMed:22014577, PubMed:29590092). In response to selective autophagy, KEAP1 is sequestered in inclusion bodies following its interaction with SQSTM1/p62, leading to inactivation of the BCR(KEAP1) complex and activation of NFE2L2/NRF2 (PubMed:20421418, PubMed:20173742, PubMed:24011591). The BCR(KEAP1) complex also mediates ubiquitination of SQSTM1/p62, increasing SQSTM1/p62 sequestering activity and degradation (PubMed:28380357). The BCR(KEAP1) complex also targets BPTF and PGAM5 for ubiquitination and degradation by the proteasome (By similarity). {ECO:0000250|UniProtKB:Q14145, ECO:0000269|PubMed:12193649, ECO:0000269|PubMed:12682069, ECO:0000269|PubMed:14764894, ECO:0000269|PubMed:15282312, ECO:0000269|PubMed:15367669, ECO:0000269|PubMed:15581590, ECO:0000269|PubMed:20173742, ECO:0000269|PubMed:20421418, ECO:0000269|PubMed:20498371, ECO:0000269|PubMed:22014577, ECO:0000269|PubMed:24011591, ECO:0000269|PubMed:28380357, ECO:0000269|PubMed:29590092, ECO:0000269|PubMed:9887101}.

Molecular Weight: 69.6 kDa

UniProt: [Q9Z2X8](#)

Pathways: [Maintenance of Protein Location](#)

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.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months