Datasheet for ABIN3093110

KPNA1 Protein (AA 1-538) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	KPNA1
Protein Characteristics:	AA 1-538
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KPNA1 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MTTPGKENFR LKSYKNKSLN PDEMRRRREE EGLQLRKQKR EEQLFKRRNV ATAEEETEEE VMSDGGFHEA QISNMEMAPG GVITSDMIEM IFSKSPEQQL SATQKFRKLL SKEPNPPIDE VISTPGVVAR FVEFLKRKEN CTLQFESAWV LTNIASGNSL QTRIVIQAGA VPIFIELLSS EFEDVQEQAV WALGNIAGDS TMCRDYVLDC NILPPLLQLF SKQNRLTMTR NAVWALSNLC RGKSPPPEFA KVSPCLNVLS WLLFVSDTDV LADACWALSY LSDGPNDKIQ AVIDAGVCRR LVELLMHNDY KVVSPALRAV GNIVTGDDIQ TQVILNCSAL QSLLHLLSSP KESIKKEACW TISNITAGNR AQIQTVIDAN IFPALISILQ TAEFRTRKEA AWAITNATSG GSAEQIKYLV ELGCIKPLCD LLTVMDSKIV QVALNGLENI LRLGEQEAKR NGTGINPYCA LIEEAYGLDK IEFLQSHENQ EIYQKAFDLI EHYFGTEDED SSIAPQVDLN QQQYIFQQCE APMEGFQL **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.**

Product Details

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.

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

Product Details

	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)

Target Details

Target:	KPNA1
Alternative Name:	KPNA1 (KPNA1 Products)
Background:	Importin subunit alpha-5 (Karyopherin subunit alpha-1) (Nucleoprotein interactor 1) (NPI-1) (RAG cohort protein 2) (SRP1-beta) [Cleaved into: Importin subunit alpha-5, N-terminally processed],FUNCTION: Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1 (PubMed:7892216, PubMed:8692858, PubMed:27713473). Binds specifically and directly to substrates containing either a simple or bipartite NLS motif (PubMed:7892216, PubMed:8692858, PubMed:27713473). Docking of the importin/substrate complex to the nuclear pore complex (NPC) is mediated by KPNB1 through binding to nucleoporin FxFG repeats and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism (PubMed:7892216, PubMed:27713473). At the nucleoplasmic side of the NPC, Ran binds to importin-beta and the three components separate and importin-alpha and -beta are re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran from importin (PubMed:7892216). The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus (PubMed:7892216). {ECO:0000269|PubMed:27713473, ECO:0000269|PubMed:7892216, ECO:0000269|PubMed:8692858}., FUNCTION: (Microbial infection) In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS. {ECO:0000269|PubMed:12610148}.
Molecular Weight:	60.2 kDa
UniProt:	P52294
Pathways:	M Phase, 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.

Application Details

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)