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Datasheet for ABIN3093074
KPNB1 Protein (AA 1-876) (Strep Tag)

Overview

Quantity:	1 mg
Target:	KPNB1
Protein Characteristics:	AA 1-876
Origin:	Human
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This KPNB1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MELITILEKT VSPDRLELEA AQKFLERAAV ENLPTFLVEL SRVLANPGNS QVARVAAGLQ
IKNSLTSKDP DIKAQYQQRW LAIDANARRE VKNYVLQTLG TETYRPSSAS QCVAGIACAE
IPVNQWPELI PQLVANVTNP NSTEHMKEST LEAIGYICQD IDPEQLQDKS NEILTAIIQG
MRKEEPSNNV KLAATNALLN SLEFTKANFD KESERHFIMQ VVCEATQCPD TRVRVAALQN
LVKIMSLYYQ YMETYMGPAL FAITIEAMKS DIDEVALQGI EFWSNVCDEE MDLAI EASEA
AEQGRPPEHT SKFYAKGALQ YLVPILTQTL TKQDENDDDD DWNPCKAAGV CLMLLATCCE
DDIVPHVLPF IKEHIKNPDW RYRDAAVMAF GCILEGPEPS QLKPLVIQAM PTLIELMKDP
SVVVRDTAAW TVGRICELLP EAAINDVYLA PLLQCLIEGL SAEPRVASNV CWFSSLAEA
AYEAADVADD QEEPATYCLS SSFELIVQKL LETTDRPDGH QNNLRSSAYE SLMEIVKNSA
KDCYPAVQKT TLVIMERLQQ VLQMESHIS TSDRIQFNDL QLLCATLQN VLRKVQHQDA
LQISDVVMAS LLRMFQSTAG SGGVQEDALM AVSTLVEVLG GEFLKYMEAF KPFLGIGLKN
YAEYQVCLAA VGLVGDLCRA LQSNIPFCD EVMQLLLENL GNENVHRSVK PQILSVFGDI

ALAIGGEFKK YLEVVLNTLQ QASQAQVDKS DYDMVDYLNE LRESCLEAYT GIVQGLKGDQ
ENVHPDVMLV QPRVEFILSF IDHIAGDEDH TDGVVACAAG LIGDLCTAFG KDVLKLVEAR
PMIHELLTEG RRSKTNKAKT LATWATKELR KLKNQA

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®): <ol style="list-style-type: none">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)

Target Details

Target:	KPNB1
Alternative Name:	KPNB1 (KPNB1 Products)
Background:	<p>Importin subunit beta-1 (Importin-90) (Karyopherin subunit beta-1) (Nuclear factor p97) (Pore targeting complex 97 kDa subunit) (PTAC97),FUNCTION: Functions in nuclear protein import, either in association with an adapter protein, like an importin-alpha subunit, which binds to nuclear localization signals (NLS) in cargo substrates, or by acting as autonomous nuclear transport receptor. Acting autonomously, serves itself as NLS receptor. 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. 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. 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. Mediates autonomously the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5 (PubMed:11682607). In association with IPO7, mediates the nuclear import of H1 histone. In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones. In case of HIV-1 infection, binds and mediates the nuclear import of HIV-1 Rev. Imports SNAI1 and PRKCI into the nucleus. {ECO:0000269 PubMed:10228156, ECO:0000269 PubMed:11682607, ECO:0000269 PubMed:11891849, ECO:0000269 PubMed:19386897, ECO:0000269 PubMed:24699649, ECO:0000269 PubMed:9687515}.</p>
Molecular Weight:	97.2 kDa
UniProt:	Q14974

Target Details

Pathways: [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.

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)