

Datasheet for ABIN3134614
KPNB1 Protein (AA 1-876) (His tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	KPNB1
Protein Characteristics:	AA 1-876
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KPNB1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

Product Details

Sequence:	MELITILEKT VSPDRLELEA AQKFLERA AV ENLPTFLVEL SRVLANPGNS QVARVAAGLQ IKNSLTSKDP DIKAQYQQRW LAIDANARRE VKNYVLQTLG TETYPSSAS QCVAGIACAE IPVSQWPELI PQLVANVTNP NSTEHMKEST LEAIGYICQD IDPEQLQDKS NEILTAIIQG MRKEEPSNNV KLAATNALLN SLEFTKANFD KESERHFIMQ VVCEATQCPD TRVRVAALQN LVKIMSLYYQ YMETYMG PAL FAITIEAMKS DIDEVALQGI EFWSNVCDEE MDLAI EASEA AEQGRPPEHT SKFYAKGALQ YLVPILTQTL TKQDENDDDD DWNPCAAGV CLMLLSTCCE DDIVPHVLPF IKEHIKNPDW RYRDAAVMAF GSILEGPEPN QLKPLVIQAM PTIELMKDP SVVVRDTTAW TVGRICELLP EAAINDVYLA PLLQCLIEGL SAEPRVASNV CWAFFSSLAEA AYEAADVADD QEEPATYCLS SSFELIVQKL LETTDRPDGH QNNLRSSAYE SLMEIVKNSA KDCYPAVQKT TLVIMERLQQ VLQMESHIS TSDRIQFNDL QSLLCATLQN VLRKVQHQDA LQISDVVMAS LLRMFQSTAG SGGVQEDALM AVSTLVEVLG GEFLKYMEAF KPFLGIGLKN YAEYQVCLAA VGLVGDL CRA LQSNILPFCD EVMQLLLENL GNENVHRSVK PQILSVFGDI
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ALAIGGEFKK YLEVVLNTLQ QASQAQVDKS DFDMDVYLNE LRESCLEAYT GIVQGLKGDQ
ENVHPDVMLV QPRVEFILSF IDHIAGDEDH TDGVVACAAG LIGDLCTAFG KDVCLKLVEAR
PMIHELLTEG RRSKTNKAKT LATWATKELR KLKNQA

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Kpn1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Product Details

Endotoxin Level: Protein is endotoxin free.

Grade: Crystallography grade

Target Details

Target: KPNB1

Alternative Name: Kpnb1 ([KPNB1 Products](#))

Background: 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. Binds to a beta-like import receptor binding (BIB) domain of RPL23A. 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 (By similarity). {ECO:0000250, ECO:0000269|PubMed:11493596}.

Molecular Weight: 98.1 kDa Including tag.

UniProt: [P70168](#)

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: Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher

Application Details

molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process