

Product datasheet

Recombinant Human KPNA4 protein ab114626

1 Image

Overview

Product name	Recombinant Human KPNA4 protein
Protein length	Full length protein

Description

Nature	Recombinant
Source	Wheat germ

Amino Acid Sequence

Accession	O00629
Species	Human

Sequence	<p>MADNEKLDNQRLKNFKNKGRDLETMRRQRNEVVVEL RKNKRDEHLLKRRN VPHEDICEDSDIDGDYRVQNTSLEAIVQNASSDNQGIQ LSAVQAARKLLS SDRNPPIDDLIKSGILPILVHCLERDDNPSLQFEAAWAL TNIASGTSEQT QAVVQSNAPVPLFLRLLHSPHQNVCEQAVWALGNIIGD GPQCRDYVISLGV VKPLLSFISPSIPITFLRNVTWVMVNLCRHKDPPPPMET IQEILPALCVL IHHTDVNILVDTVWALSYLTDAGNEQIQMVIDSGVPHLV PLLSHQEVKV QTAALRAVGNMTGTDEQTQVVLNCDALSHFPALLTHP KEKINKEAVWFL SNITAGNQQQVQAVIDANLVPMIHLLDKGDFGTQKEAA WAISNLTISGR KDQVAYLIQQNVIPPCNLLTVKDAQVVQVVDGLSNIL KMAEDEAETIG NLIEECGGLEKIEQLQNHENEDIYKLAYEIIDQFFSSDDID EDPSLVPEA IQGGTFGFNSSANVPTEGFQF</p>
-----------------	---

Molecular weight	83 kDa including tags
Amino acids	1 to 521
Tags	GST tag N-Terminus

Specifications

Our [Abpromise guarantee](#) covers the use of **ab114626** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

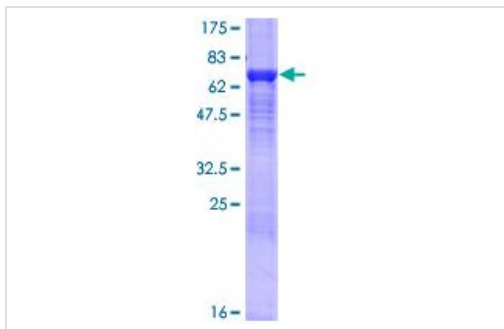
Applications	ELISA SDS-PAGE Western blot
Form	Liquid
Additional notes	Protein concentration is above or equal to 0.05 mg/ml. This protein is best used within three months from the date of receipt.

Preparation and Storage

Stability and Storage	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 8.00 Constituents: 0.3% Glutathione, 0.79% Tris HCl
------------------------------	---

General Info

Function	Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1. Binds specifically and directly to substrates containing either a simple or bipartite NLS motif. 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. In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS. In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS.
Tissue specificity	Highly expressed in testis, ovary, small intestine, heart, skeletal muscle, lung and pancreas, but barely detectable in kidney, thymus, colon and peripheral blood leukocytes.
Sequence similarities	Belongs to the importin alpha family. Contains 10 ARM repeats. Contains 1 IBB domain.
Domain	Consists of an N-terminal hydrophilic region, a hydrophobic central region composed of 10 repeats, and a short hydrophilic C-terminus. The N-terminal hydrophilic region contains the importin beta binding domain (IBB domain), which is sufficient for binding importin beta and essential for nuclear protein import. The IBB domain is thought to act as an intrasteric autoregulatory sequence by interacting with the internal autoinhibitory NLS. Binding of KPNB1 probably overlaps the internal NLS and contributes to a high affinity for cytoplasmic NLS-containing cargo substrates. After dissociation of the importin/substrate complex in the nucleus the internal autoinhibitory NLS contributes to a low affinity for nuclear NLS-containing proteins. The major and minor NLS binding sites are mainly involved in recognition of simple or bipartite NLS motifs. Structurally located within in a helical surface groove they contain several conserved Trp and Asn residues of the corresponding third helices (H3) of ARM repeats which mainly contribute to binding.

Images

ab114626 analysed by 12.5% SDS-PAGE and stained with Coomassie Blue.

SDS-PAGE - Recombinant Human KPNA4 protein
(ab114626)

Please note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors