# abcam

## Product datasheet

## Recombinant Human KPNA4 protein ab114626

### 1 图像

#### 描述

产品名称 重组人KPNA4蛋白

纯**度** >= 80 % Purified via GST Tag.

Glutathione Sepharose

表达系统 Wheat germ

Accession <u>O00629</u>

**蛋白长度** Full length protein

无动物成分 No

性质 Recombinant

种属 Human

序列 MADNEKLDNQRLKNFKNKGRDLETMRRQRNEVVVELRKNKRD

EHLLKRRN

VPHEDICEDSDIDGDYRVQNTSLEAIVQNASSDNQGIQLSAV

QAARKLLS

SDRNPPIDDLIKSGILPILVHCLERDDNPSLQFEAAWALTNI

**ASGTSEQT** 

QAVVQSNAVPLFLRLLHSPHQNVCEQAVWALGNIIGDGPQCR

**DYVISLGV** 

VKPLLSFISPSIPITFLRNVTWVMVNLCRHKDPPPPMETIQE

ILPALCVL

IHHTDVNILVDTVWALSYLTDAGNEQIQMVIDSGIVPHLVPL

LSHQEVKV

QTAALRAVGNIVTGTDEQTQVVLNCDALSHFPALLTHPKEKI

NKEAVWFL

SNITAGNQQQVQAVIDANLVPMIIHLLDKGDFGTQKEAAWAI

**SNLTISGR** 

 ${\tt KDQVAYLIQQNVIPPFCNLLTVKDAQVVQVVLDGLSNILKMA}$ 

**EDEAETIG** 

NLIEECGGLEKIEQLQNHENEDIYKLAYEIIDQFFSSDDIDE

DPSLVPEA IQGGTFGFNSSANVPTEGFQF

预测分子量 83 kDa including tags

**氨基酸** 1 to 521

标签 GST tag N-Terminus

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#### 技术指标

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.

应**用** ELISA

SDS-PAGE

Western blot

形式 Liquid

#### 制备和贮存

稳定性和存储 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 HCI

#### 常规信息

功能 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.

组织特异性

 $\label{thm:lighty} \mbox{Highly expressed in test is, ovary, small intestine, heart, skeletal muscle, lung and pancreas, but$ 

barely detectable in kidney, thymus, colon and peripheral blood leukocytes.

序列相似性 Belongs to the importin alpha family.

Contains 10 ARM repeats.

Contains 1 IBB domain.

结**构域** 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

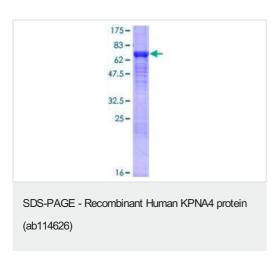
importin/substrate complex in the nucleus the internal autohibitory NLS contributes to a low affinity

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.

细胞定位 Cytoplasm. Nucleus.



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

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