abcam

Product datasheet

Anti-KPNA2 antibody ab84440

★★★★★ 1 Abreviews 26 References 5 Images

Overview

Product name	Anti-KPNA2 antibody
Description	Rabbit polyclonal to KPNA2
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Chimpanzee, Orangutan
Immunogen	Synthetic peptide corresponding to a region within C terminal amino acids 475-529 (ALQNHENESV YKASLSLIEK YFSVEEEEDQ NVVPETTSEG YTFQVQDGAP GTFNF) of human KPNA2 (NP_002257.1). Run BLAST with ExPASy Run BLAST with NCBI
General notes	Concentration is optimized for IHC and not determined The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 6.8 Preservative: 0.09% Sodium azide Constituents: 0.1% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab84440 in the following tested applications.

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

Application	Abreviews	Notes
IHC-P		1/100 - 1/500.
WB	★★★★★ (1)	Use at an assay dependent concentration. Predicted molecular weight: 57 kDa.

Target

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.

Tissue specificity

Expressed ubiquitously.

Sequence similarities

Belongs to the importin alpha family.
Contains 10 ARM repeats.
Contains 1 IBB domain.

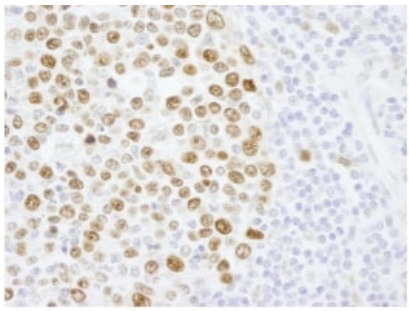
Domain

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 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.

Cellular localization

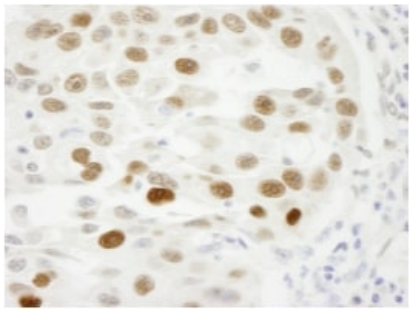
Cytoplasm. Nucleus.

Images



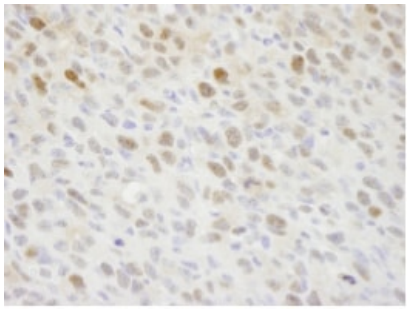
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KPNA2 antibody (ab84440)

Immunohistochemical analysis of KPNA2 in formalin fixed, paraffin embedded human metastatic lymph node tissue, using a 1/250 dilution of ab84440.
Detection: DAB staining.



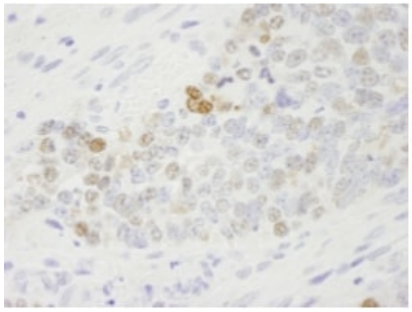
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KPNA2 antibody (ab84440)

Immunohistochemical analysis of KPNA2 in formalin fixed, paraffin embedded human bladder carcinoma tissue, using a 1/250 dilution of ab84440.
Detection: DAB staining.



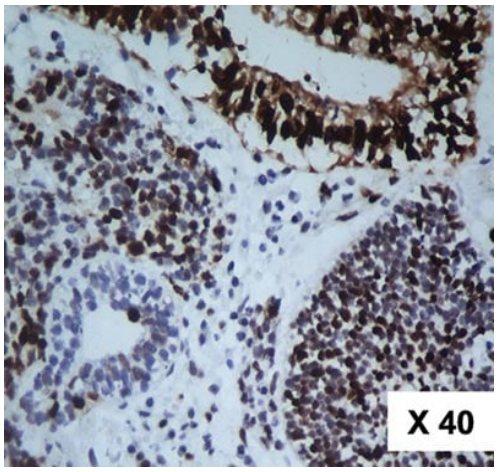
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KPNA2 antibody (ab84440)

Immunohistochemical analysis of KPNA2 in formalin fixed, paraffin embedded mouse squamous cell carcinoma tissue, using a 1/250 dilution of ab84440.
Detection: DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KPNA2 antibody (ab84440)

Immunohistochemical analysis of KPNA2 in formalin fixed, paraffin embedded mouse teratoma tissue, using a 1/250 dilution of ab84440.
Detection: DAB staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KPNA2 antibody (ab84440)

Image from He L et al., PLoS One. 2012;7(9):e42992. doi: 10.1371/journal.pone.0042992. Epub 2012 Sep 4. Fig 4.; doi:10.1371/journal.pone.0042992; September 4, 2012, PLoS ONE 7(9): e42992.

Immunohistochemical analysis of Human ovarian germ cell tumour, staining KPNA2 with ab84440.

Antigen retrieval was performed by submerging the sample in citrate buffer (pH 6) and microwaving. The sections were blocked with 1% BSA before incubating with primary antibody (1/400). Staining was detected using DAB.

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