

Product datasheet

Anti-KPNA2 antibody ab70160

[3 References](#) [3 Images](#)

Overview

Product name	Anti-KPNA2 antibody
Description	Rabbit polyclonal to KPNA2
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, IP
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Chimpanzee, Orangutan 
Immunogen	A region between residue 475 and the C-terminus (residue 529) of human KPNA2 (NP_002257.1).
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7 Preservative: 0.09% Sodium azide Constituents: 1.815% Tris, 1.764% Sodium citrate, 0.021% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab70160 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
WB		1/10000 - 1/25000. Detects a band of approximately 58 kDa (predicted molecular weight: 58 kDa).
IHC-P		1/1000 - 1/5000. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IP		Use a concentration of 0.04 µg/ml.

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.

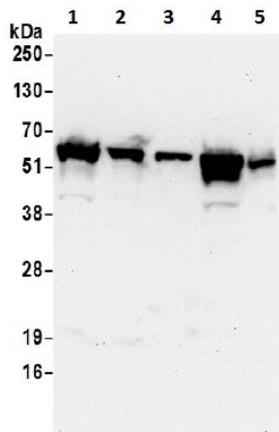
The IBB domain is thought to act as an intrasteric autoregulatory sequence by interacting with the internal autoinhibitory NLS. Binding of KPNB1 probably overlaps the internal NLS and contributes to a high affinity for cytoplasmic NLS-containing cargo substrates. After dissociation of the importin/substrate complex in the nucleus the internal 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.

Cellular localization

Cytoplasm. Nucleus.

Images



Western blot - Anti-KPNA2 antibody (ab70160)

All lanes : Anti-KPNA2 antibody (ab70160) at 0.04 µg/ml

Lane 1 : HeLa whole cell lysate at 50 µg

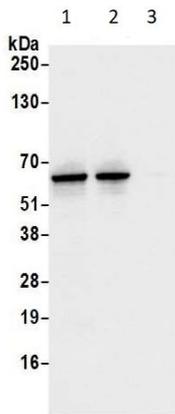
Lane 2 : HeLa whole cell lysate at 15 µg

Lane 3 : HeLa whole cell lysate at 5 µg

Lane 4 : 293T whole cell lysate at 50 µg

Lane 5 : Mouse NIH3T3 whole cell lysate at 50 µg

Predicted band size: 58 kDa



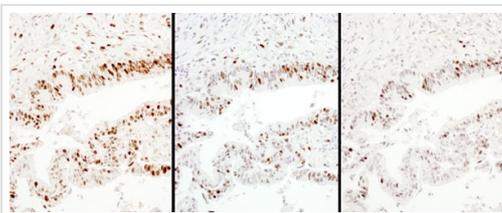
Immunoprecipitation - Anti-KPNA2 antibody (ab70160)

Immunoprecipitation of KPNA2 with ab70160 at 0.04 µg/mL.

Lane 1 and 2: Different lots of ab70160 + Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HEK293 cells prepared using NETN lysis buffer.

Lane 2: IgG control + Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HEK293 cells prepared using NETN lysis buffer.

Detection: Chemiluminescence



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-KPNA2 antibody (ab70160)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon carcinoma tissue labelling KPNA2 with ab70160 at 1/1000 (1µg/ml; left and right) and 1/5000 (0.2µg/ml; middle). Detection: DAB.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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