




### Anti-KPNA4 antibody ab176585

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#### Overview

<b>Product name</b>	Anti-KPNA4 antibody
<b>Description</b>	Rabbit polyclonal to KPNA4
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Rabbit, Horse, Cow, Dog, Chimpanzee, Rhesus monkey, Gorilla, Chinese hamster, Orangutan 
<b>Immunogen</b>	Synthetic peptide within Human KPNA4 aa 471-521 (C terminal). The exact sequence is proprietary. (NP_002259.1). Sequence:  EDIYKLAYEIIDQFFSSDDIDEDPSLVPEAIQGGTGFNSSA NVPTEGFQ F  Database link: <a href="#">Q00629</a>   <a href="#">Run BLAST with</a>  <a href="#">Run BLAST with</a>
<b>Positive control</b>	HeLa and 293T whole cell lysates; Human Ovarian Carcinoma and Prostate Carcinoma tissues.
<b>General notes</b>	<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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 6.8 Preservative: 0.09% Sodium azide

	Constituents: 99% Tris buffered saline, 0.1% BSA
<b>Purity</b>	Immunogen affinity purified
<b>Purification notes</b>	ab176585 was affinity purified using an epitope specific to KPNA4 immobilized on solid support.
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab176585 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
<b>WB</b>		1/2000 - 1/10000. Predicted molecular weight: 57 kDa.
<b>IP</b>		Use at 2-5 µg/mg of lysate.
<b>IHC-P</b>		1/100 - 1/500. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

## Target

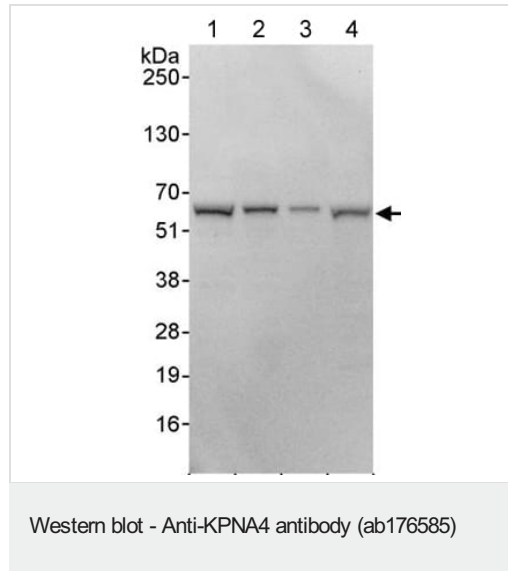
<b>Function</b>	Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1. Binds specifically and directly to substrates containing either a simple or bipartite NLS motif. Docking of the importin/substrate complex to the nuclear pore complex (NPC) is mediated by KPNB1 through 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.
<b>Tissue specificity</b>	Highly expressed in testis, ovary, small intestine, heart, skeletal muscle, lung and pancreas, but barely detectable in kidney, thymus, colon and peripheral blood leukocytes.
<b>Sequence similarities</b>	Belongs to the importin alpha family. Contains 10 ARM repeats. Contains 1 IBB domain.
<b>Domain</b>	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



**All lanes :** Anti-KPNA4 antibody (ab176585) at 0.04 µg/ml

**Lane 1 :** HeLa whole cell lysate at 50 µg

**Lane 2 :** HeLa whole cell lysate at 15 µg

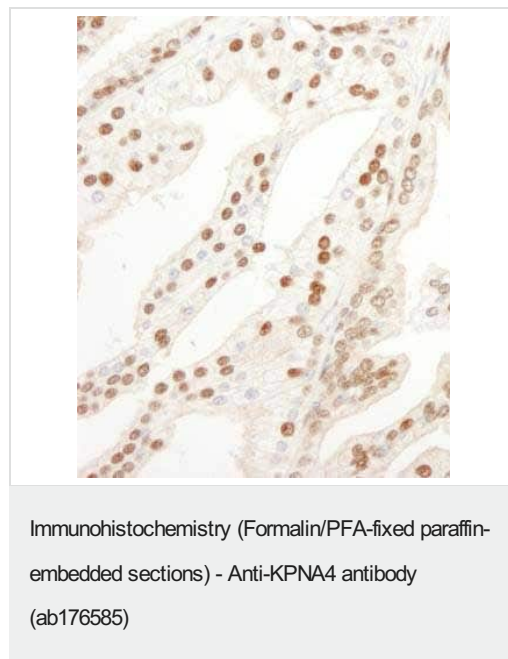
**Lane 3 :** HeLa whole cell lysate at 5 µg

**Lane 4 :** 293T whole cell lysate at 50 µg

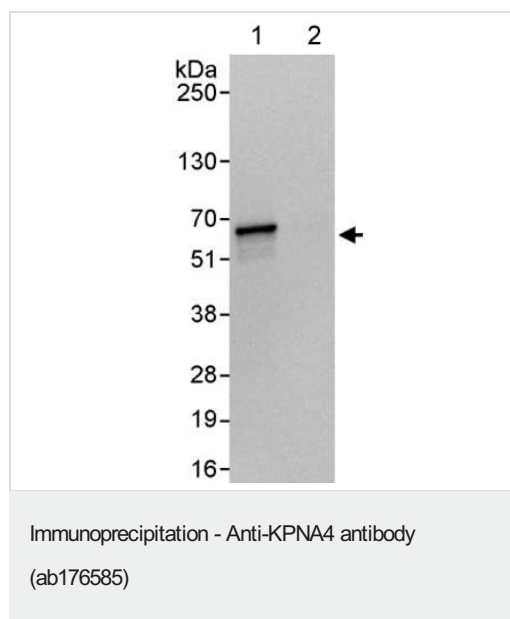
Developed using the ECL technique.

**Predicted band size:** 57 kDa

**Exposure time:** 3 seconds



Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human prostate carcinoma tissue labeling KPNA4 with ab176585 at 1 µg/ml.



Detection of KPNA4 in Immunoprecipitates of Jurkat whole cell lysate (1 mg for IP, 20% of IP loaded) using ab176585 at 3 µg/mg lysate for IP (Lane 1). For WB detection ab176585 was used at 0.4 µg/ml. Lane 2 represents control IgG IP.

Detection: Chemiluminescence with an exposure time of 0.5 seconds.

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