abcam

Product datasheet

Anti-KPNA2 antibody ab6036

4 References 4 图像

概述

产品名称	Anti-KPNA2抗体
描述	**山羊多克隆抗体**to KPNA2
宿主	Goat
经测试应用	**适用于:** Flow Cyt, ICC/IF, IHC-P, WB
种属反应性	**与反应:** Rat, Human **预测可用于:** Mouse
免疫原	Synthetic peptide corresponding to Human KPNA2 aa 518-529 (C terminal). Sequence: QVQDGAPGTFNF Database link: **P52292** Run BLAST with Run BLAST with
阳性对照	WB: KNRK, Jurkat, CaCo-2, A549 and MCF7 cell lysate; ICC/IF: A549 and U2OS cells Flow Cyt: A549 cells
常规说明	GenBank Accession Number – NP_002257.

The import of proteins into the nucleus is a process that involves at least 2 steps. The first is an energy-independent docking of the protein to the nuclear envelope and the second is an energy-dependent translocation through the nuclear pore complex. Imported proteins require a nuclear localization sequence (NLS) which generally consists of a short region of basic amino acids or 2 such regions spaced about 10 amino acids apart. Proteins involved in the first step of nuclear import have been identified in different systems. These include the Xenopus protein importin and its yeast homolog, SRP1 (a suppressor of certain temperature-sensitive mutations of RNA polymerase I in Saccharomyces cerevisiae), which bind to the NLS. KPNA2 protein interacts with the NLSs of DNA helicase Q1 and SV40 T antigen and may be involved in the nuclear transport of proteins. KPNA2 also may play a role in V(D)J recombination.

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

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
存储溶液	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: Tris buffered saline, 0.5% BSA
纯度	Immunogen affinity purified
纯化说明	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Primary antibody说明	The import of proteins into the nucleus is a process that involves at least 2 steps. The first is an energy-independent docking of the protein to the nuclear envelope and the second is an energy-dependent translocation through the nuclear pore complex. Imported proteins require a nuclear localization sequence (NLS) which generally consists of a short region of basic amino acids or 2 such regions spaced about 10 amino acids apart. Proteins involved in the first step of nuclear import have been identified in different systems. These include the Xenopus protein importin and its yeast homolog, SRP1 (a suppressor of certain temperature-sensitive mutations of RNA polymerase I in Saccharomyces cerevisiae), which bind to the NLS. KPNA2 protein interacts with the NLSs of DNA helicase Q1 and SV40 T antigen and may be involved in the nuclear transport of proteins. KPNA2 also may play a role in V(D)J recombination.
克隆	多克隆
同种型	IgG

应用

The Abpromise guarantee **Abpromise™承诺保证使用ab6036于以下的经测试应用**

"应用说明"部分 下显示的仅为推荐的起始稀释度;实际最佳的稀释度/浓度应由使用者检定。

应用	Ab评论	说明
Flow Cyt		Use a concentration of 10 µg/ml.
ICC/IF		Use a concentration of 10 µg/ml.
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use a concentration of 0.03 - 0.1 µg/ml. Detects a band of approximately 55 kDa (predicted molecular weight: 58 kDa). A 1 hour primary incubation is recommended for this product.

靶标

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.

组织特异性

Expressed ubiquitously.

序列相似性

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

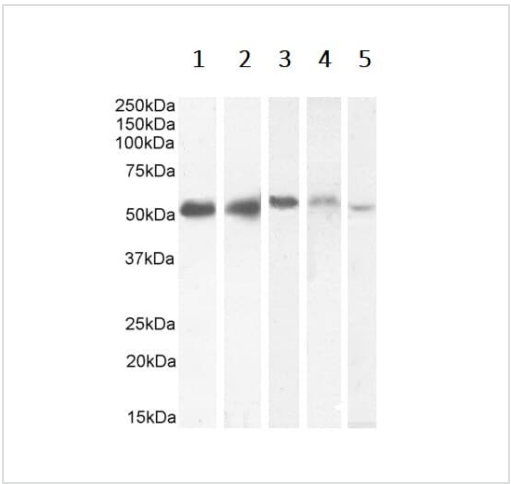
结构域

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.

图片



Western blot - Anti-KPNA2 antibody (ab6036)

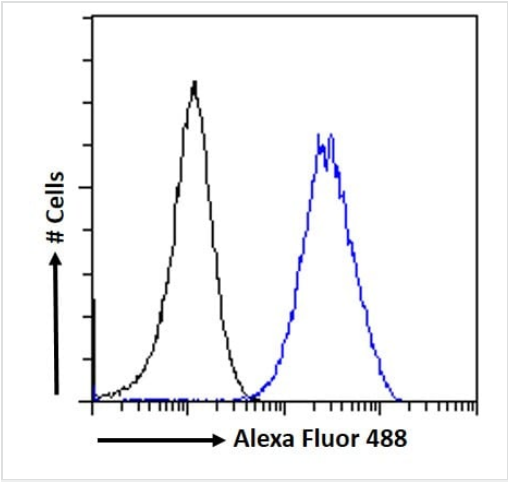
Lanes 1-2 : Anti-KPNA2 antibody (ab6036) at 0.1 µg/ml
Lanes 3-5 : Anti-KPNA2 antibody (ab6036) at 0.03 µg/ml

Lane 1 : Jurkat cell lysate
Lane 2 : CaCo-2 cell lysate
Lane 3 : A549 cell lysate
Lane 4 : MCF7 cell lysate
Lane 5 : KNRK cell lysate

Lysates/proteins at 35 µg per lane.

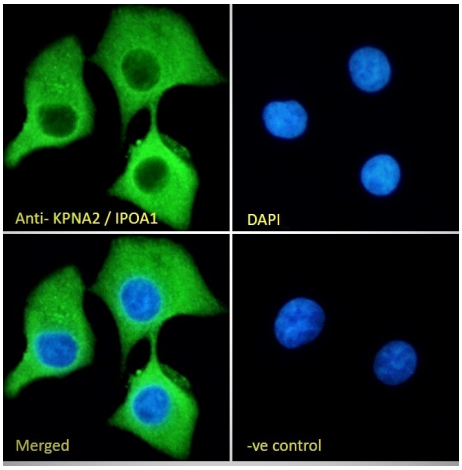
Predicted band size: 58 kDa

Detected by chemiluminescence.



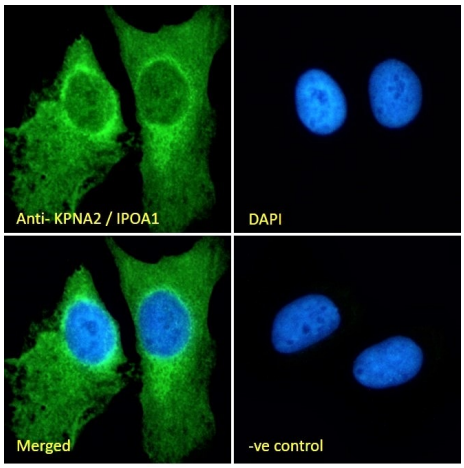
Flow Cytometry - Anti-KPNA2 antibody (ab6036)

Flow cytometric analysis of paraformaldehyde fixed A549 cells (blue line), permeabilized with 0.5% Triton. Primary incubation 1hr (10µg/mL) followed by Alexa Fluor 488 secondary antibody (1µg/mL). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-KPNA2 antibody (ab6036)

Immunocytochemistry/Immunofluorescence analysis of paraformaldehyde fixed A549 cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10µg/mL) followed by Alexa Fluor 488 secondary antibody (2µg/mL), showing cytoplasmic staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10µg/mL) followed by Alexa Fluor 488 secondary antibody (2µg/mL).



Immunocytochemistry/ Immunofluorescence - Anti-KPNA2 antibody (ab6036)

Immunocytochemistry/Immunofluorescence analysis of paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary incubation 1hr (10µg/mL) followed by Alexa Fluor 488 secondary antibody (2µg/mL), showing cytoplasmic and ER/Golgi staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10µg/mL) followed by Alexa Fluor 488 secondary antibody (2µg/mL).

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.cn/abpromise** or contact our technical team.

Terms and conditions

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