

Product datasheet

Anti-KPNA2 antibody ab6036

1 References 2 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: ELISA, ICC/IF, WB
种属反应性	与反应: Human 预测可用于: Mouse, Rat 
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	HeLa Lysate.
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.

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	Preservative: 0.02% Sodium Azide

纯度	Constituents: 0.5% BSA, Tris-saline. pH 7.3
纯化说明	Immunogen affinity purified
Primary antibody说明	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
克隆	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 <i>Xenopus</i> protein importin and its yeast homolog, SRP1 (a suppressor of certain temperature-sensitive mutations of RNA polymerase I in <i>Saccharomyces cerevisiae</i>), 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.
同种型	多克隆 IgG

应用

Our [Abpromise guarantee](#) covers the use of **ab6036** in the following tested applications.

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

应用	Ab评论	说明
IF		Use at an assay dependent concentration.
ELISA		Use at an assay dependent concentration. Antibody detection limit dilution 1:8,000.
ICC/IF		Use at an assay dependent concentration.
WB		Use a concentration of 0.1 - 3 µg/ml. Detects a band of approximately 55-60 kDa (predicted molecular weight: 58 kDa).

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.

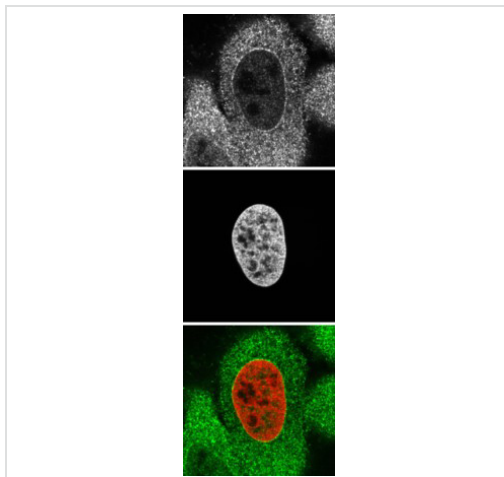
The IBB domain is thought to act as an intrasteric autoregulatory sequence by interacting with the internal autoinhibitory NLS. Binding of KPNA1 probably overlaps the internal NLS and contributes to a high affinity for cytoplasmic NLS-containing cargo substrates. After dissociation of the importin/substrate 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.

细胞定位

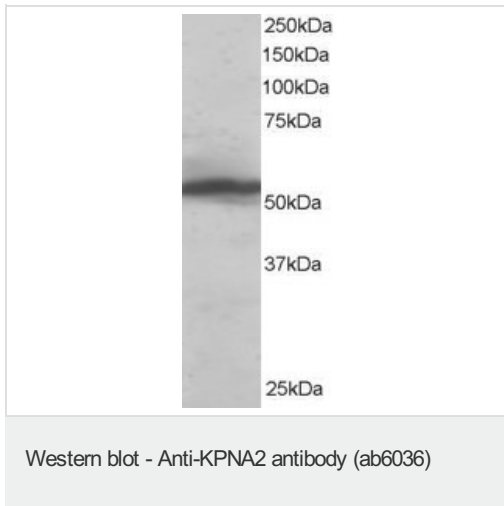
Cytoplasm. Nucleus.

图片



Immunofluorescence staining of HeLa cells with ab6036 (top panel and green). The cells were fixed in 4% PFA. The cells were counter-stained with HistoneH2B-GFP fusion as a DNA marker (middle panel and red).

Immunocytochemistry/ Immunofluorescence - Anti-KPNA2 antibody (ab6036)



ab6036 at 0.1µg/ml staining approximately 55-60kDa band of KPNA2 in HeLa Lysate by Western blot (ECL).

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