

Rabbit KPNA1 Polyclonal Antibody | anti-KPNA1 antibody

KPNA1 Antibody

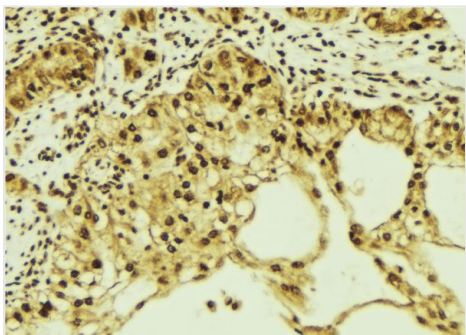
CATALOG # AAA326352	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS ELISA, Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

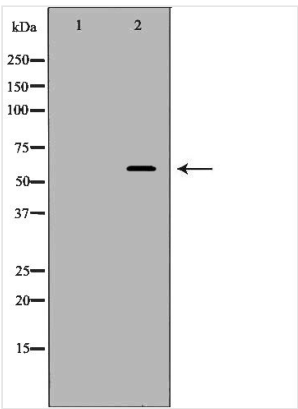
KPNA1; Polyclonal Antibody; KPNA1 Antibody; IMA5_HUMAN; Importin alpha 1 subunit; Importin alpha 5; Importin alpha S1; Importin subunit alpha-5; N-terminally processed; IPO A5; IPOA 5; IPOA5; Karyopherin alpha 1; Karyopherin alpha 1 subunit; Karyopherin subunit alpha-1; KPNA 1; mSRP 1; mSRP1; NPI 1; NPI-1; NPI1; Nucleoprotein interactor 1; RAG cohort protein 2; RCH 2; RCH2; Recombination activating gene cohort 2; SRP 1; SRP1 beta; SRP1-beta; anti-KPNA1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	KPNA1 antibody detects endogenous levels of total KPNA1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	538
Applicable Applications for anti-KPNA1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human KPNA1
Subcellular Location	Cytoplasm. Nucleus.
Tissue Specificity	Expressed ubiquitously.
Predicted Cross Reactivity	Bovine, Horse, Sheep, Rabbit, Dog, Chicken
Similarity	Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA326352 at 1/100 staining Human breast cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of Hela whole cell lysates, using KPNA1 Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-KPNA1 antibody

Description: The transport of molecules between the nucleus and the cytoplasm in eukaryotic cells is mediated by the nuclear pore complex (NPC), which consists of 60-100 proteins. Small molecules (up to 70 kD) can pass through the nuclear pore by nonselective diffusion while larger molecules are transported by an active process. The protein encoded by this gene belongs to the importin alpha family, and is involved in nuclear protein import. This protein interacts with the recombination activating gene 1 (RAG1) protein and is a putative substrate of the RAG1 ubiquitin ligase. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2012]

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. In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS.

Subunit Structure: Heterodimer; with KPNB1. Interacts with ANP32E. Interacts with ZIC3 (By similarity). Interacts with NSMF; the interaction occurs in a calcium-independent manner after synaptic NMDA receptor stimulation and is required for nuclear import of NSMF but is competed by CABP1 (By similarity). Interacts with the nucleoprotein of influenza A viruses. Binds to HCMV (human cytomegalovirus) UL84, HIV-1 Vpr and to ebolavirus VP24. Interacts with APEX1 and RAG1. Interacts with CTNNB1 (via its N-terminal). Interacts with AICDA (via its NLS). Interacts with SNAI1 (via zinc fingers). Interacts with DCAF8.

Post-translational Modifications: Polyubiquitinated in the presence of RAG1 (in vitro).

Similarity: 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 (By similarity). 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 (By similarity). Belongs to the importin alpha family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	222144293
NCBI GeneID	3836
NCBI Accession #	NP_002255.3

NCBI GenBank Nucleotide #	NM_002264.3
UniProt Accession #	P52294 ; Q6IBQ9 ; Q9BQ56 ; D3DN93
Molecular Weight	Observed: 60 kDa Predicted: 61 kDa
NCBI Official Full Name	importin subunit alpha-5
NCBI Official Synonym Full Names	karyopherin subunit alpha 1
NCBI Official Symbol	KPNA1
NCBI Official Synonym Symbols	RCH2; SRP1; IPOA5; NPI-1
NCBI Protein Information	importin subunit alpha-5
UniProt Protein Name	Importin subunit alpha-5
UniProt Gene Name	KPNA1
UniProt Synonym Gene Names	RCH2; NPI-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/kpna1-antibody-immunohistochemistry-western-blot-elisa/326352>