10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KPNA1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP59090

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	P52294
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60222
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SRP1-beta
Epitope Specificity	81-180/538
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Nucleus.
SIMILARITY	Belongs to the importin alpha family. Contains 10 ARM repeats. Contains 1 IBB domain.
SUBUNIT	Heterodimer; with KPNB1. Interacts with ANP32E. Interacts with ZIC3 (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 CTNNBL1 (via its N-terminal). Interacts with AICDA (via its NLS).
Post-translational modifications	Polyubiquitinated in the presence of RAG1 (in vitro).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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].

Additional Information

Gene ID	3836
Other Names	Importin subunit alpha-5, Karyopherin subunit alpha-1, Nucleoprotein interactor 1, NPI-1, RAG cohort protein 2, SRP1-beta, Importin subunit alpha-5, N-terminally processed, KPNA1, RCH2

Target/Specificity	Expressed ubiquitously.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	KPNA1
Synonyms	RCH2
Function	Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1 (PubMed:27713473, PubMed:7892216, PubMed:8692858). Binds specifically and directly to substrates containing either a simple or bipartite NLS motif (PubMed:27713473, PubMed:7892216, PubMed:8692858). 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 (PubMed:27713473, PubMed:7892216). 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 (PubMed:7892216). 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 (PubMed:7892216). Mediator of PR-DUB complex component BAP1 nuclear import; acts redundantly with KPNA2 and Transportin-1/TNPO1 (PubMed:35446349).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Expressed ubiquitously.