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

KPNA4 Rabbit pAb

Catalog # AP97124

Product Information

Application	WB
Primary Accession	O00629
Other Accession	O00629
Reactivity	Human, Mouse
Predicted	Rat, Chicken, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57887
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human KPNA4
Epitope Specificity	1-100/521
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the importin alpha family. Contains 10 ARM repeats. Contains 1 IBB domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The nuclear import of karyophilic proteins is directed by short amino acid sequences termed nuclear localization signals (NLSs). Karyopherins, or importins, are cytoplasmic proteins that recognize NLSs and dock NLS-containing proteins to the nuclear pore complex. The protein encoded by this gene shares the sequence similarity with Xenopus importin-alpha and Saccharomyces cerevisiae Srp1. This protein is found to interact with the NLSs of DNA helicase Q1 and SV40 T antigen. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	3840
Other Names	IPOA3; QIP1; SRP3; CR201_G0007844; IMA3_HUMAN; KPNA4; Importin alpha Q1 (Qip1); Karyopherin subunit alpha-4; karyopherin subunit alpha 4; karyopherin alpha 4 (importin alpha 3); karyopherin alpha 4; importin alpha 3
Dilution	WB=1:500-2000
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	KPNA4 {ECO:0000303|PubMed:38512451, ECO:0000312|HGNC:HGNC:6397}
Function	Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1 (PubMed:10567565, PubMed:20818336, PubMed:28760339, PubMed:29042532, PubMed:38512451). Binds specifically and directly to substrates containing either a simple or bipartite NLS motif (PubMed:20818336, PubMed:28760339, PubMed:29042532, PubMed:38512451). 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:20818336, PubMed:28760339, PubMed:29042532, PubMed:38512451). 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:20818336, PubMed:28760339, PubMed:29042532, PubMed:38512451). 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:20818336, PubMed:28760339, PubMed:29042532, PubMed:38512451). Mediates nuclear import of AARS1, MRTFA and RANBP3 (PubMed:10567565, PubMed:20818336, PubMed:28760339, PubMed:38512451).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Highly expressed in testis, ovary, small intestine, heart, skeletal muscle, lung and pancreas, but barely detectable in kidney, thymus, colon and peripheral blood leukocytes

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