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KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2223

Product Information

Application	WB, FC
Primary Accession	P52294
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Clone Names	25GB700
Calculated MW	60222
Gene Name	KPNA1
Aliases	KPNA1; Karyopherin Subunit Alpha 1; NPI-1; RCH2; IPOA5; SRP1; Karyopherin Alpha 1 (Importin Alpha 5); Nucleoprotein Interactor 1; Importin Subunit Alpha-5; RAG Cohort Protein 2; Importin Alpha 5; SRP1-Beta; Recombination Activating Gene Cohort; Karyopherin Subunit Alpha-1; Importin Subunit Alpha-1; Karyopherin Alpha 1; Importin-Alpha-S1
Immunogen	Recombinant protein of human KPNA1

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

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.

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