

KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody
Mouse monoclonal antibody
Catalog # AGI2223**Specification****KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	P52294
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1
Calculated MW	Predicted, 60 kDa; observed, 60 kDa
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

KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody - 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

KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody - Protein Information**Name** KPNA1**Synonyms** RCH2**Function**

Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1 (PubMed: [27713473](http://www.uniprot.org/citations/27713473), PubMed: [7892216](http://www.uniprot.org/citations/7892216), PubMed: [8692858](http://www.uniprot.org/citations/8692858)). Binds specifically and directly to substrates containing either a simple or bipartite NLS motif (PubMed: [27713473](http://www.uniprot.org/citations/27713473), PubMed: [7892216](http://www.uniprot.org/citations/7892216), PubMed: [8692858](http://www.uniprot.org/citations/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

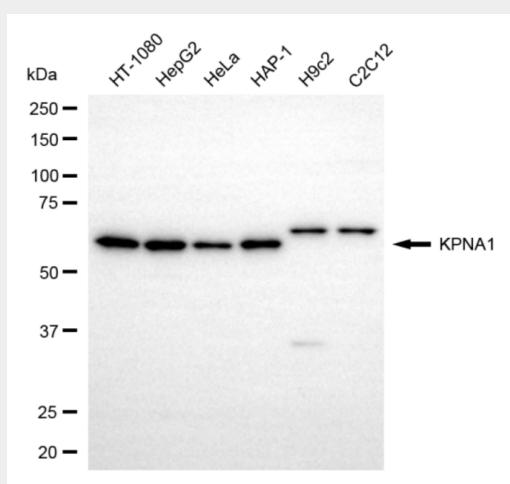
Expressed ubiquitously.

KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody - Protocols

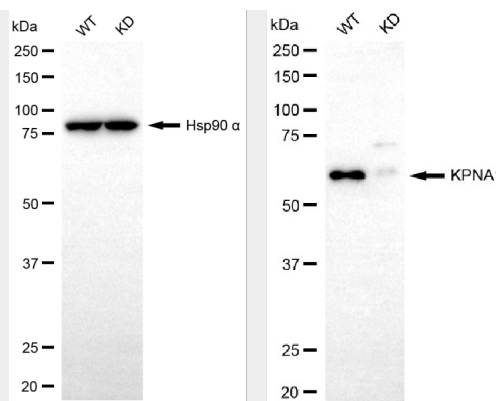
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-KPNA1 Mouse Monoclonal Antibody - Images

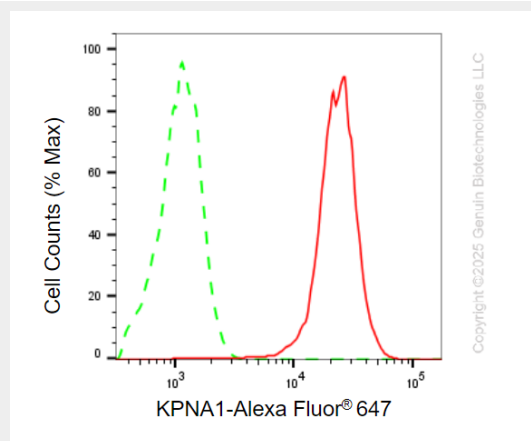


Western blotting analysis using anti-KPNA1 antibody (Cat#AGI2223). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-KPNA1 antibody (Cat#AGI2223, 1:2,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



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Western blotting analysis using anti-KPNA1 antibody (Cat#AGI2223). KPNA1 expression in wild-type (WT) and KPNA1 knockdown (KD) 293T cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-KPNA1 antibody (Cat#AGI2223, 1:2,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.



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Flow cytometric analysis of KPNA1 expression in HepG2 cells using anti-KPNA1 antibody (Cat#AGI2223, 1:2,000). Green, isotype control; red, KPNA1.