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Goat Anti-KPNA1 / Importin alpha 5 Antibody

Peptide-affinity purified goat antibody
Catalog # AF1601a

Specification

Goat Anti-KPNA1 / Importin alpha 5 Antibody - Product Information

Application	**WB, E**
Primary Accession	P52294
Other Accession	NP_002255, 3836, 16646 (mouse), 288064 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**60222**

Goat Anti-KPNA1 / Importin alpha 5 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

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-KPNA1 / Importin alpha 5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-KPNA1 / Importin alpha 5 Antibody - 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.

Goat Anti-KPNA1 / Importin alpha 5 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 Cytomety
- Cell Culture

Goat Anti-KPNA1 / Importin alpha 5 Antibody - Images

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AF1601a staining (1 µg/ml) of HeLa lysate (RIPA buffer, 35 µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.

Goat Anti-KPNA1 / Importin alpha 5 Antibody - Background

Recombination activating proteins RAG1 and RAG2 regulate and mediate V(D)J recombination, the process by which genes for immunoglobulins and T-cell receptors are generated. Several other ubiquitously expressed proteins are thought to be recruited in the recombination process. Among these are the genes affected in severe combined immune deficiency and genes involved in ds-DNA break repair. The protein encoded by this gene interacts with RAG1 and may play a role in V(D)J recombination. Two transcript variants, one protein-coding and the other not, have been found for this gene.

Goat Anti-KPNA1 / Importin alpha 5 Antibody - References

Probing the specificity of binding to the major nuclear localization sequence-binding site of importin-alpha using oriented peptide library screening. Yang SN, et al. J Biol Chem, 2010 Jun 25. PMID 20406804.
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Ebolavirus VP24 binding to karyopherins is required for inhibition of interferon signaling. Mateo M, et al. J Virol, 2010 Jan. PMID 19889762.
Defining the human deubiquitinating enzyme interaction landscape. Sowa ME, et al. Cell, 2009 Jul 23. PMID 19615732.
Mammalian BTBD12/SLX4 assembles a Holliday junction resolvase and is required for DNA repair. Svendsen JM, et al. Cell, 2009 Jul 10. PMID 19596235.