

**KPNA3 Antibody**  
**Catalog # ASC11207****Specification**

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**KPNA3 Antibody - Product Information**

Application	WB, ICC, IF
Primary Accession	<a href="#">O00505</a>
Other Accession	<a href="#">NP_002258</a> , <a href="#">34485722</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	KPNA3 antibody can be used for detection of KPNA3 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 10 µg/mL. For immunofluorescence start at 20 µg/mL.

**KPNA3 Antibody - Additional Information**

Gene ID	3839
<b>Target/Specificity</b>	
KPNA3;	

**Reconstitution & Storage**

KPNA3 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

KPNA3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**KPNA3 Antibody - Protein Information**

**Name** KPNA3

**Synonyms** QIP2

**Function**

Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1. Binds specifically and directly to substrates containing either a simple or bipartite NLS motif. 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. 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. 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. In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS. Recognizes NLSs of influenza A virus nucleoprotein probably through ARM repeats 7-9.

**Cellular Location**

Cytoplasm. Nucleus

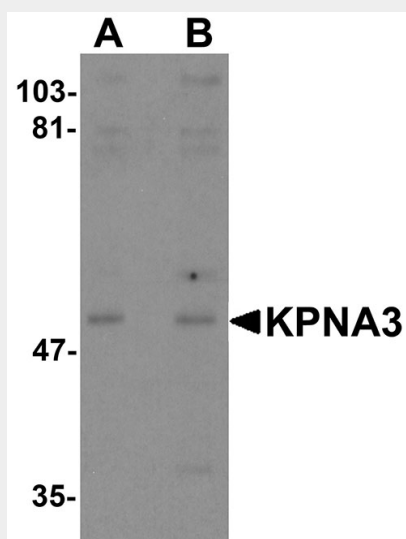
**Tissue Location**

Ubiquitous. Highest levels in heart and skeletal muscle

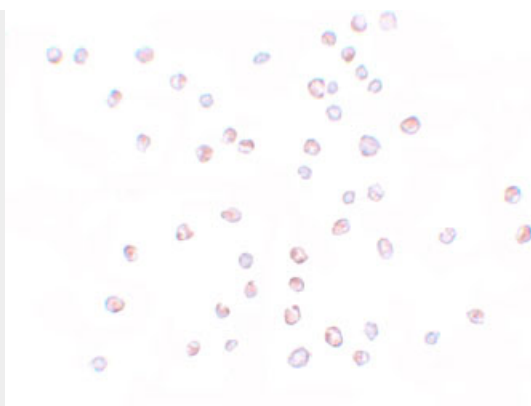
**KPNA3 Antibody - Protocols**

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

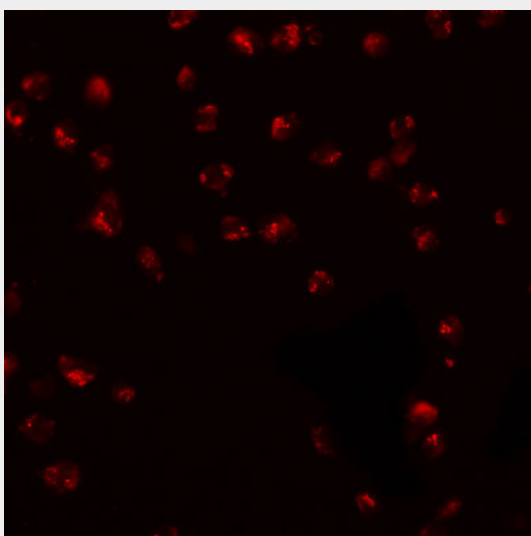
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**KPNA3 Antibody - Images**

Western blot analysis of KPNA3 in EL4 cell lysate with KPNA3 antibody at (A) 1 and (B) 2 µg/mL.



Immunocytochemistry of KPNA3 in HeLa cells with KPNA3 antibody at 10 µg/mL.



Immunofluorescence of KPNA3 in EL4 cells with KPNA3 antibody at 20 µg/mL.

### **KPNA3 Antibody - Background**

KPNA3 Antibody: Karyopherin, a cytosolic and heterodimeric protein complex consisting of alpha and beta subunits, is responsible for targeting proteins with nuclear localization signals to the nuclear pore complex by an energy requiring, Ran-dependent mechanism. The alpha subunit and imported substrate enter the nucleus and accumulate in the nucleoplasm, while the beta subunit accumulates at the NPC. KPNA3, the alpha subunit 3 of karyopherin, is similar to human KPNA2, suggesting that KPNA3 may be involved in the nuclear transport system. It is ubiquitously expressed and recent studies have shown that human KPNA3 may be associated with schizophrenia.

### **KPNA3 Antibody - References**

- Moroianu J. Molecular mechanisms of nuclear protein transport. Crit. Rev. Eukaryot. Gene Expr.1997; 7:61-72.
- Gilchrist D and Rexach M. Molecular basis for the rapid dissociation of nuclear localization signals from karyopherin alpha in the nucleoplasm. J. Biol. Chem.2003; 278: 51937-49.
- Takeda S, Fujiwara T, Shimizu F, et al. Isolation and mapping of karyopherin alpha 3 (KPNA3), a human gene that is highly homologous to genes encoding Xenopus importin, yeast SRP1 and human RCH1. Cytogenet. Cell Genet.1997; 76:87-93.
- Zhang H, Ju G, Wei J, et al. A combined effect of the KPNA3 and KPNB3 genes on susceptibility to schizophrenia. Neurosci. Lett.2006; 402:173-5.