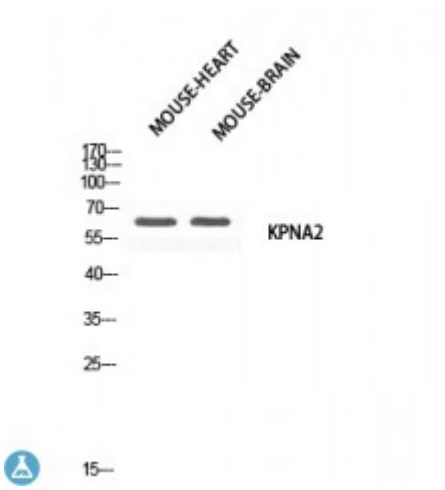
# Anti-Karyopherin alpha antibody

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| **Description** | Rabbit polyclonal to Karyopherin alpha2. |

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| **Model** | STJ97644 |
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat |
| **Applications** | ELISA, WB |
| **Immunogen** | Synthesized peptide derived from human Karyopherin alpha2. |
| **Immunogen Region** | N-terminal |
| **Gene ID** | 3838 |
| **Gene Symbol** | KPNA2 |
| **Dilution range** | WB 1:500-1:2000ELISA 1:10000 |
| **Specificity** | Karyopherin alpha2 Polyclonal Antibody detects endogenous levels of Karyopherin alpha2 protein. |
| **Tissue Specificity** | Expressed ubiquitously. |
| **Purification** | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen. |
| **Note** | For Research Use Only (RUO). |
| **Protein Name** | Importin subunit alpha-1 Karyopherin subunit alpha-2 RAG cohort protein 1 SRP1-alpha |
| **Clonality** | Polyclonal |
| **Conjugation** | Unconjugated |

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| **Isotype** | IgG |
| **Formulation** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide. |
| **Concentration** | 1 mg/ml |
| **Storage Instruction** | Store at -20°C, and avoid repeat freeze-thaw cycles. |
| **Database Links** | HGNC:6395OMIM:600685 |
| **Alternative Names** | Importin subunit alpha-1 Karyopherin subunit alpha-2 RAG cohort protein 1 SRP1-alpha |
| **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. |
| **Sequence and Domain Family** | Consists of an N-terminal hydrophilic region, a hydrophobic central region composed of 10 repeats, and a short hydrophilic C-terminus. The N-terminal hydrophilic region contains the importin beta binding domain (IBB domain), which is sufficient for binding importin beta and essential for nuclear protein import. The IBB domain is thought to act as an intrasteric autoregulatory sequence by interacting with the internal autoinhibitory NLS. Binding of KPNB1 probably overlaps the internal NLS and contributes to a high affinity for cytoplasmic NLS-containing cargo substrates. After dissociation of the importin/substrate complex in the nucleus the internal autohibitory NLS contributes to a low affinity for nuclear NLS-containing proteins . The major and minor NLS binding sites are mainly involved in recognition of simple or bipartite NLS motifs. Structurally located within in a helical surface groove they contain several conserved Trp and Asn residues of the corresponding third helices (H3) of ARM repeats which mainly contribute to binding . |
| **Cellular Localization** | Cytoplasm Nucleus |