Anti-IMA1 antibody

Description	Unconjugated Rabbit polyclonal to IMA1

Model	STJ190908
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, WB
Gene ID	3836
Gene Symbol	KPNA1
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	IMA1 Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Expressed ubiquitously.
Purification	IMA1 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-5 Karyopherin subunit alpha-1 Nucleoprotein interactor 1 NPI-1 RAG cohort protein 2 SRP1-beta Importin subunit alpha-5, N-terminally processed
Molecular Weight	59 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG

Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6394OMIM:600686
Alternative 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
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.
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
Post-translational Modifications	Polyubiquitinated in the presence of RAG1 (in vitro).