

KPNA5 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP19166a**Specification**

KPNA5 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [O15131](#)**KPNA5 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 3841**Other Names**

Importin subunit alpha-6, Karyopherin subunit alpha-5, KPNA5

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

KPNA5 Antibody (N-term) Blocking Peptide - Protein Information**Name** KPNA5 ([HGNC:6398](#))**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. Mediates nuclear import of STAT1 homodimers and STAT1/STAT2 heterodimers by recognizing non-classical NLSs of STAT1 and STAT2 through ARM repeats 8-9. Recognizes influenza A virus nucleoprotein through ARM repeat 7-9 In vitro, mediates the nuclear import of human cytomegalovirus UL84 by recognizing a non-classical NLS.

Cellular Location

Cytoplasm.

Tissue Location

Testis.

KPNA5 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

KPNA5 Antibody (N-term) Blocking Peptide - Images

KPNA5 Antibody (N-term) Blocking Peptide - Background

The transport of molecules between the nucleus and the cytoplasm in eukaryotic cells is mediated by the nuclear pore complex (NPC) which consists of 60-100 proteins and is probably 120 million daltons in molecular size. Small molecules (up to 70 kD) can pass through the nuclear pore by nonselective diffusion; larger molecules are transported by an active process. Most nuclear proteins contain short basic amino acid sequences known as nuclear localization signals (NLSs). KPNA5 protein belongs to the importin α protein family and is thought to be involved in NLS-dependent protein import into the nucleus.

KPNA5 Antibody (N-term) Blocking Peptide - References

Yang, S.N., et al. J. Biol. Chem. 285(26):19935-19946(2010) Singh, A.P., et al. Cell 131(3):492-504(2007) Lamesch, P., et al. Genomics 89(3):307-315(2007) Lim, J., et al. Cell 125(4):801-814(2006) Sekimoto, T., et al. EMBO J. 23(9):1934-1942(2004)