10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KPNA1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP14416a

Specification

KPNA1 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession P52294

KPNA1 Antibody (N-term) Blocking Peptide - 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

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.

KPNA1 Antibody (N-term) Blocking Peptide - Protein Information

Name KPNA1

Synonyms RCH2

Function
Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1 (PubMed:7892216, PubMed:8692858, PubMed:27713473). Binds specifically and directly to substrates containing either a simple or bipartite NLS motif (PubMed:7892216, PubMed:8692858, PubMed:27713473). 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:7892216, PubMed:27713473). 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).

Cellular Location
Cytoplasm. Nucleus

Tissue Location
Expressed ubiquitously.

KPNA1 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

KPNA1 Antibody (N-term) Blocking Peptide - Images

KPNA1 Antibody (N-term) Blocking Peptide - Background

Recombination activating proteins RAG1 and RAG2 regulateand mediate V(D)J recombination, the process by which genes forimmunoglobulins and T-cell receptors are generated. Several otherubiquitously expressed proteins are thought to be recruited in therecombination process. Among these are the genes affected in severecombined immune deficiency and genes involved in ds-DNA breakrepair. The protein encoded by this gene interacts with RAG1 andmay play a role in V(D)J recombination. Two transcript variants,one protein-coding and the other not, have been found for thisgene.

KPNA1 Antibody (N-term) Blocking Peptide - References

O'Seaghdha, C.M., et al. Hum. Mol. Genet. 19(21):4296-4303(2010)Yang, S.N., et al. J. Biol. Chem. 285(26):19935-19946(2010)Bian, X.L., et al. Virus Res. 150 (1-2), 135-137 (2010) :Mateo, M., et al. J. Virol. 84(2):1169-1175(2010)Simkus, C., et al. Mol. Immunol. 46(7):1319-1325(2009)