

KPNB1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP6816a**Specification**

KPNB1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q14974](#)**KPNB1 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 3837**Other Names**

Importin subunit beta-1, Importin-90, Karyopherin subunit beta-1, Nuclear factor p97, Pore targeting complex 97 kDa subunit, PTAC97, KPNB1, NTF97

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP6816a](/products/AP6816a) was selected from the N-term region of human KPNB1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

KPNB1 Antibody (N-term) Blocking Peptide - Protein Information**Name** KPNB1**Synonyms** NTF97**Function**

Functions in nuclear protein import, either in association with an adapter protein, like an importin-alpha subunit, which binds to nuclear localization signals (NLS) in cargo substrates, or by acting as autonomous nuclear transport receptor (PubMed: [10228156](http://www.uniprot.org/citations/10228156), PubMed: [11682607](http://www.uniprot.org/citations/11682607), PubMed: [11891849](http://www.uniprot.org/citations/11891849), PubMed: [19386897](http://www.uniprot.org/citations/19386897), PubMed: [20818336](http://www.uniprot.org/citations/20818336), PubMed: [24699649](http://www.uniprot.org/citations/24699649)).

[7615630](http://www.uniprot.org/citations/7615630), PubMed: [9687515](http://www.uniprot.org/citations/9687515)). Acting autonomously, serves itself as NLS receptor (PubMed: [10228156](http://www.uniprot.org/citations/10228156), PubMed: [11682607](http://www.uniprot.org/citations/11682607), PubMed: [11891849](http://www.uniprot.org/citations/11891849), PubMed: [19386897](http://www.uniprot.org/citations/19386897), PubMed: [20818336](http://www.uniprot.org/citations/20818336), PubMed: [24699649](http://www.uniprot.org/citations/24699649), PubMed: [7615630](http://www.uniprot.org/citations/7615630), PubMed: [9687515](http://www.uniprot.org/citations/9687515)). 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: [10228156](http://www.uniprot.org/citations/10228156), PubMed: [11682607](http://www.uniprot.org/citations/11682607), PubMed: [11891849](http://www.uniprot.org/citations/11891849), PubMed: [19386897](http://www.uniprot.org/citations/19386897), PubMed: [20818336](http://www.uniprot.org/citations/20818336), PubMed: [24699649](http://www.uniprot.org/citations/24699649), PubMed: [7615630](http://www.uniprot.org/citations/7615630), PubMed: [9687515](http://www.uniprot.org/citations/9687515)). 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: [10228156](http://www.uniprot.org/citations/10228156), PubMed: [11682607](http://www.uniprot.org/citations/11682607), PubMed: [11891849](http://www.uniprot.org/citations/11891849), PubMed: [19386897](http://www.uniprot.org/citations/19386897), PubMed: [20818336](http://www.uniprot.org/citations/20818336), PubMed: [24699649](http://www.uniprot.org/citations/24699649), PubMed: [7615630](http://www.uniprot.org/citations/7615630), PubMed: [9687515](http://www.uniprot.org/citations/9687515)). 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: [10228156](http://www.uniprot.org/citations/10228156), PubMed: [11682607](http://www.uniprot.org/citations/11682607), PubMed: [11891849](http://www.uniprot.org/citations/11891849), PubMed: [19386897](http://www.uniprot.org/citations/19386897), PubMed: [24699649](http://www.uniprot.org/citations/24699649), PubMed: [7615630](http://www.uniprot.org/citations/7615630), PubMed: [9687515](http://www.uniprot.org/citations/9687515)). Mediates autonomously the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5 (PubMed: [11682607](http://www.uniprot.org/citations/11682607), PubMed: [9687515](http://www.uniprot.org/citations/9687515), PubMed: [9687515](http://www.uniprot.org/citations/9687515)). In association with IPO7, mediates the nuclear import of H1 histone (PubMed: [10228156](http://www.uniprot.org/citations/10228156), PubMed: [10228156](http://www.uniprot.org/citations/10228156)). In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones (By similarity). Imports MRTFA, SNAIL and PRKCI into the nucleus (PubMed: [11891849](http://www.uniprot.org/citations/11891849), PubMed: [19386897](http://www.uniprot.org/citations/19386897), PubMed: [20818336](http://www.uniprot.org/citations/20818336), PubMed: [24699649](http://www.uniprot.org/citations/24699649)).

Cellular Location

Cytoplasm. Nucleus envelope

KPNB1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

KPNB1 Antibody (N-term) Blocking Peptide - Images**KPNB1 Antibody (N-term) Blocking Peptide - Background**

NTF97 is involved in nuclear protein import, either by associating itself with an adapter protein (for example, importin-alpha subunit which binds to nuclear localization signals (NLS) in cargo substrates), or by acting autonomously as a nuclear transport receptor.

KPNB1 Antibody (N-term) Blocking Peptide - References

Nordgard,S.H., et.al., Genes Chromosomes Cancer 47 (8), 680-696 (2008)