

**Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide**  
**Synthetic peptide**  
**Catalog # BP1934a****Specification**

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**Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - Product Information**Primary Accession [Q92973](#)**Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - Additional Information****Gene ID** 3842**Other Names**

Transportin-1, Importin beta-2, Karyopherin beta-2, M9 region interaction protein, MIP, TNPO1, KPNB2, MIP1, TRN

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP1934a](/product/products/AP1934a) was selected from the N-term region of human TNPO1. 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.

**Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - Protein Information****Name** TNPO1**Synonyms** KPNB2, MIP1, TRN**Function**

Functions in nuclear protein import as nuclear transport receptor. Serves as receptor for nuclear localization signals (NLS) in cargo substrates (PubMed: [24753571](http://www.uniprot.org/citations/24753571)). May mediate docking of the importin/substrate complex to the nuclear pore complex (NPC) through binding to nucleoporin 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 the importin, the importin/substrate complex dissociates and importin is re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran. 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 (By similarity). Involved in nuclear import of M9-containing proteins. In vitro, binds directly to the M9 region of the heterogeneous nuclear ribonucleoproteins (hnRNP), A1 and A2 and mediates their nuclear import. Involved in hnRNP A1/A2 nuclear export. Mediates the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5 (PubMed:<a href="http://www.uniprot.org/citations/11682607" target="\_blank">11682607</a>). In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones (By similarity). In vitro, mediates nuclear import of SRP19 (PubMed:<a href="http://www.uniprot.org/citations/11682607" target="\_blank">11682607</a>). Mediates nuclear import of ADAR/ADAR1 isoform 1 and isoform 5 in a RanGTP-dependent manner (PubMed:<a href="http://www.uniprot.org/citations/19124606" target="\_blank">19124606</a>, PubMed:<a href="http://www.uniprot.org/citations/24753571" target="\_blank">24753571</a>). Main mediator of PR-DUB complex component BAP1 nuclear import; acts redundantly with the karyopherins KPNA1 and KPNA2 (PubMed:<a href="http://www.uniprot.org/citations/35446349" target="\_blank">35446349</a>).

#### **Cellular Location**

Cytoplasm. Nucleus.

### **Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - Protocols**

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

- [Blocking Peptides](#)

### **Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - Images**

### **Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - Background**

TNPO1 comprises the beta subunit of the karyopherin receptor complex which interacts with nuclear localization signals to target nuclear proteins to the nucleus. The karyopherin receptor complex is a heterodimer of an alpha subunit which recognizes the nuclear localization signal and a beta subunit which docks the complex at nucleoporins.

### **Importin beta-2 (TNPO1) Antibody (N-term) Blocking peptide - References**

Fineberg, K., et al., Biochemistry 42(9):2625-2633 (2003). Nelson, L.M., et al., Virology 306(1):162-169 (2003). Le Roux, L.G., et al., J. Virol. 77(4):2330-2337 (2003). Limon, A., et al., J. Virol. 76(21):10598-10607 (2002). Dvorin, J.D., et al., J. Virol. 76(23):12087-12096 (2002).