

TNPO1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1934e**Specification**

TNPO1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q92973](#)**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 [AP1934e](/products/AP1934e) 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.

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:11682607). In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones (By similarity). In vitro, mediates nuclear import of SRP19 (PubMed:11682607). Mediates nuclear import of ADAR/ADAR1 isoform 1 and isoform 5 in a RanGTP-dependent manner (PubMed:19124606, PubMed:24753571).

Cellular Location

Cytoplasm. Nucleus.

TNPO1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

TNPO1 Antibody (N-term) Blocking Peptide - Images

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.

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).