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Importin beta-2 (TNPO1) Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP1934b

Specification

Importin beta-2 (TNPO1) Antibody (C-term) Blocking peptide - Product Information

Primary Accession Q92973

Importin beta-2 (TNPO1) Antibody (C-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 AP1934b was selected from the C-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 (C-term) Blocking peptide - Protein Information

Name TNPO1

Importin beta-2 (TNPO1) Antibody (C-term) Blocking peptide - Background

This gene encodes 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. Alternate splicing of this gene results in two transcript variants encoding the same protein.

Importin beta-2 (TNPO1) Antibody (C-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).

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). Is thought to 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. Appears also to be involved in hnRNP A1/A2 nuclear export. Mediates the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5. Binds to a beta-like import receptor binding (BIB) domain of RPL23A. In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones, and SRP19 (By similarity). Mediates nuclear import of ADAR/ADAR1 isoform 1 and isoform 5 in a RanGTP-dependent manner (PubMed:19124606, PubMed:24753571).

Cellular Location
Cytoplasm. Nucleus.

Importin beta-2 (TNPO1) Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides