

For Research Use Only

TNPO1 Polyclonal antibody

Catalog Number: 20679-1-AP

Featured Product

5 Publications



Basic Information

Catalog Number: 20679-1-AP	GenBank Accession Number: NM_002270	Purification Method: Antigen affinity purification
Size: 150ul, Concentration: 300 ug/ml by Nanodrop and 160 ug/ml by Bradford method using BSA as the standard;	GeneID (NCBI): 3842	Recommended Dilutions: WB 1:200-1:1000 IHC 1:250-1:1000
Source: Rabbit	UNIPROT ID: Q92973	
Isotype: IgG	Full Name: transportin 1	
	Calculated MW: 102 kDa	
	Observed MW: 95-102 kDa	

Applications

Tested Applications: WB, IHC, ELISA	Positive Controls: WB : HeLa cells, HEK-293 cells, L02 cells, mouse liver tissue IHC : mouse lung tissue,
Cited Applications: WB, IF	
Species Specificity: human, mouse	
Cited Species: human	

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Background Information

TNPO1, also named as KPNB2, MIP1, TRN and MIP, belongs to the importin beta family. TNPO1 functions in nuclear protein import as nuclear transport receptor. It serves as receptor for nuclear localization signals (NLS) in cargo substrates. TNPO1 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. TNPO1 is involved in nuclear import of M9-containing proteins. In vitro, it binds directly to the M9 region of the heterogeneous nuclear ribonucleoproteins (hnRNP), A1 and A2 and mediates their nuclear import. It is involved in hnRNP A1/A2 nuclear export. TNPO1 mediates the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5. It binds to a beta-like import receptor binding (BIB) domain of RPL23A. In vitro, it mediates nuclear import of H2A, H2B, H3 and H4 histones, and SRP19. In case of HIV-1 infection, binds and mediates the nuclear import of HIV-1 Rev. The antibody is specific to TNPO1.

Notable Publications

Author	Pubmed ID	Journal	Application
Yueh-Lin Tsai	35581240	Sci Rep	IF
Yu Huang	35171907	PLoS Genet	WB,IF
Qin Zhou	39454958	J Biol Chem	WB

Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

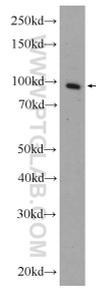
For technical support and original validation data for this product please contact:

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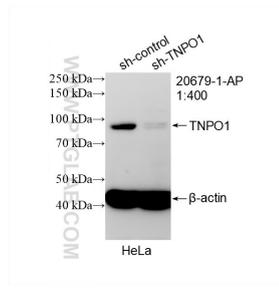
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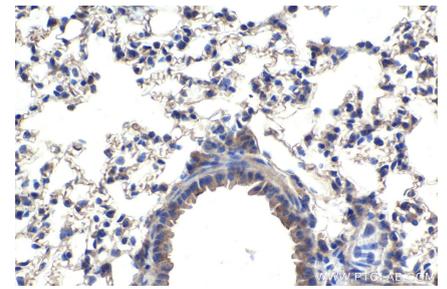
Selected Validation Data



HeLa cells were subjected to SDS PAGE followed by western blot with 20679-1-AP (Transportin-1 antibody at dilution of 1:300 incubated at room temperature for 1.5 hours.



WB result of TNPO1 antibody (20679-1-AP; 1:400; incubated at room temperature for 1.5 hours) with sh-Control and sh-TNPO1 transfected HeLa cells.



Immunohistochemical analysis of paraffin-embedded mouse lung tissue slide using 20679-1-AP (Transportin-1 antibody) at dilution of 1:500 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).