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TNPO3 Antibody

Catalog # ASC10689

Product Information

Application	WB, E
Primary Accession	Q9Y5L0
Other Accession	EAW83708, 119604114
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	104203
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TNPO3 antibody can be used for detection of TNPO3 by Western blot at 1 - 2 g/mL.

Additional Information

Gene ID	23534
Other Names	Transportin-3, Importin-12, Imp12, Transportin-SR, TRN-SR, TNPO3, IPO12
Target/Specificity	TNPO3;
Reconstitution & Storage	TNPO3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TNPO3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TNPO3 {ECO:0000303|PubMed:23667635, ECO:0000312|HGNC:HGNC:17103}
Function	Importin, which transports target proteins into the nucleus (PubMed:10366588, PubMed:10713112, PubMed:11517331, PubMed:12628928, PubMed:24449914). Specifically mediates the nuclear import of splicing factor serine/arginine (SR) proteins, such as RBM4, SFRS1 and SFRS2, by recognizing phosphorylated SR domains (PubMed:10366588, PubMed:10713112, PubMed:11517331, PubMed:12628928, PubMed:24449914). Also mediates the nuclear import of serine/arginine (SR) protein CPSF6, independently of CPSF6 phosphorylation (PubMed:30916345, PubMed:31465518). The nuclear import process is regulated by the small GTPase Ran that partitions between cytoplasm and nucleus in the

	predominantly GDP- and GTP-bound form, respectively (PubMed:23878195, PubMed:24449914). Importin associates with target cargo proteins in the cytoplasm, and the competitive binding of GTP-bound Ran induces the release of cargos in the nucleus (PubMed:23878195, PubMed:24449914).
Cellular Location	Nucleus envelope. Cytoplasm. Note=Localizes to the nuclear envelope and annulate lamellae, which consists in stacks of endoplasmic reticulum membranes containing a high density of nuclear pores
Tissue Location	Expressed in skeletal muscle.

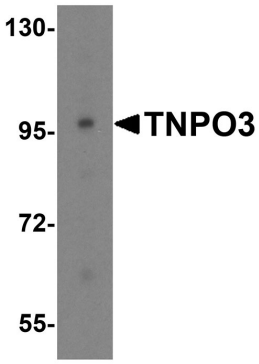
Background

TNPO3 Antibody: TNPO3 is a member of the importin beta/transportin family of nuclear import receptors and is specific for the essential splicing factors termed SR proteins, binding specifically and directly to the arginine/serine (RS)-rich domains of these proteins. Further experiments demonstrated that this interaction occurs only when these RS domains are phosphorylated. More recently, TNPO3 was identified as an HIV dependency factor (HDF) and that depletion of TNPO3 resulted in HIV inhibition after reverse transcription but before integration, suggesting that TNPO3 may be an important drug target in HIV treatment. At least three isoforms of TNPO3 are known to exist.

References

Kataoka N, Bachorik JL and Dreyfuss G. Transportin-SR, a nuclear import receptor for SR proteins. J. Cell Biol.1999; 145:1145-52.
Lai M-C, Lin R-I, Huang S-Y, et al. A human importin-b family protein, transportin-SR2, interacts with the phosphorylated RS domain of SR proteins. J. Biol. Chem.2000; 275:7950-7.
Brass AL, Dykxhoorn DM, Benita Y, et al. Identification of host proteins required for HIV infection through a functional genomic screen. Science2008; 319:921-6.

Images



Western blot analysis of TNPO3 in HeLa cell lysate with TNPO3 antibody at 0.5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.