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NUP50 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1913b

Product Information

Application	WB, E
Primary Accession	Q9UKX7
Other Accession	O08587, Q9JIH2, Q8N6V5
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB8362
Calculated MW	50144
Antigen Region	432-461

Additional Information

Gene ID	10762
Other Names	Nuclear pore complex protein Nup50, 50 kDa nucleoporin, Nuclear pore-associated protein 60 kDa-like, Nucleoporin Nup50, NUP50, NPAP60L
Target/Specificity	This NUP50 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 432-461 amino acids from the C-terminal region of human NUP50.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NUP50 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NUP50
Synonyms	NPAP60L

Function	Component of the nuclear pore complex that has a direct role in nuclear protein import (PubMed:20016008). Actively displaces NLSs from importin-alpha, and facilitates disassembly of the importin- alpha:beta-cargo complex and importin recycling (PubMed:20016008). Interacts with regulatory proteins of cell cycle progression including CDKN1B (By similarity). This interaction is required for correct intracellular transport and degradation of CDKN1B (By similarity).
Cellular Location	Nucleus, nuclear pore complex. Nucleus membrane {ECO:0000250|UniProtKB:O08587}; Peripheral membrane protein {ECO:0000250|UniProtKB:O08587}; Nucleoplasmic side {ECO:0000250|UniProtKB:O08587}. Note=Localizes to the nucleoplasmic fibrils of the nuclear pore complex (By similarity). Dissociates from the NPC structure early during prophase of mitosis (PubMed:12802065) Associates with the newly formed nuclear membrane during telophase (PubMed:12802065). In the testis, the localization changes during germ cell differentiation from the nuclear surface in spermatocytes to the whole nucleus (interior) in spermatids and back to the nuclear surface in spermatozoa (By similarity). {ECO:0000250|UniProtKB:O08587, ECO:0000269|PubMed:12802065}
Tissue Location	Ubiquitous. Highest levels in testis, peripheral blood leukocytes and fetal liver

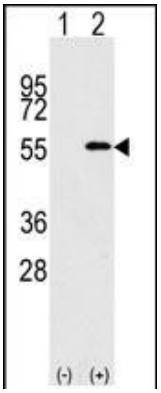
Background

The nuclear pore complex is a massive structure that extends across the nuclear envelope, forming a gateway that regulates the flow of macromolecules between the nucleus and the cytoplasm. Nucleoporins are the main components of the nuclear pore complex in eukaryotic cells. NUP50 is a member of the FG-repeat containing nucleoporins that functions as a soluble cofactor in importin-alpha:beta-mediated nuclear protein import. NUP50 may serve as a binding site on the nuclear side of the pore complex for export receptor-cargo complexes. It interacts with multiple transport receptor proteins including p27Kip1. This interaction is required for correct intracellular transport and degradation of p27Kip1.

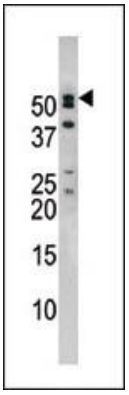
References

Lindsay, M.E., et al., Cell 110(3):349-360 (2002).
Swaminathan, S., et al., Dev. Cell 3(3):304-306 (2002).
Smitherman, M., et al., Mol. Cell. Biol. 20(15):5631-5642 (2000).
Guan, T., et al., Mol. Cell. Biol. 20(15):5619-5630 (2000).
Collins, J.E., et al., Genome Biol. 5 (10), R84 (2004) (): ().

Images



Western blot analysis of NUP50 (arrow) using rabbit polyclonal NUP50 Antibody (C-term) (RB08362). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the NUP50 gene (Lane 2) (Origene Technologies).



Western blot analysis of anti-NUP50 Pab (Cat. #AP1913b) in mouse brain tissue lysate. NUP50(arrow) was detected using the purified Pab.