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PEX14 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12560c

Product Information

Application	WB, FC, E
Primary Accession	O75381
Other Accession	NP_004556.1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31100
Calculated MW	41237
Antigen Region	121-150

Additional Information

Gene ID	5195
Other Names	Peroxisomal membrane protein PEX14, PTS1 receptor-docking protein, Peroxin-14, Peroxisomal membrane anchor protein PEX14, PEX14
Target/Specificity	This PEX14 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 121-150 amino acids from the Central region of human PEX14.
Dilution	WB~~1:1000 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	PEX14 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PEX14 {ECO:0000303|PubMed:9653144, ECO:0000312|HGNC:HGNC:8856}
Function	Component of the PEX13-PEX14 docking complex, a translocon channel that specifically mediates the import of peroxisomal cargo proteins bound to PEX5 receptor (PubMed:24235149, PubMed:28765278, PubMed:9653144). The

PEX13-PEX14 docking complex forms a large import pore which can be opened to a diameter of about 9 nm (By similarity). Mechanistically, PEX5 receptor along with cargo proteins associates with the PEX14 subunit of the PEX13-PEX14 docking complex in the cytosol, leading to the insertion of the receptor into the organelle membrane with the concomitant translocation of the cargo into the peroxisome matrix (PubMed:24235149, PubMed:28765278). Plays a key role for peroxisome movement through a direct interaction with tubulin (PubMed:21525035).

Cellular Location Peroxisome membrane; Single-pass membrane protein {ECO:0000250|UniProtKB:Q642G4}

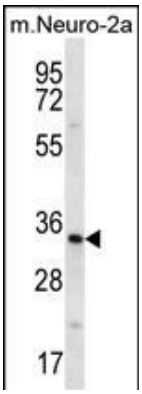
Background

This gene encodes an essential component of the peroxisomal import machinery. The protein is integrated into peroxisome membranes with its C-terminus exposed to the cytosol, and interacts with the cytosolic receptor for proteins containing a PTS1 peroxisomal targeting signal. The protein also functions as a transcriptional corepressor and interacts with a histone deacetylase. A mutation in this gene results in one form of Zellweger syndrome.

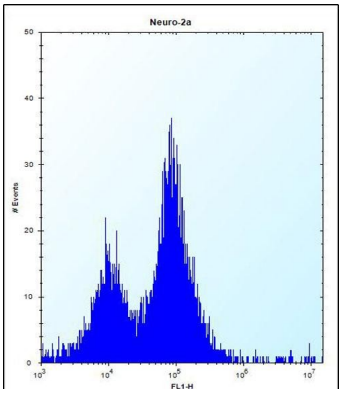
References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Macgregor, S., et al. Hum. Mol. Genet. 19(13):2716-2724(2010) Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) : Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009) Shiozawa, K., et al. J. Biol. Chem. 284(37):25334-25342(2009)

Images



PEX14 Antibody (Center) (Cat. #AP12560c) western blot analysis in mouse Neuro-2a cell line lysates (35ug/lane).This demonstrates the PEX14 antibody detected the PEX14 protein (arrow).



PEX14 Antibody (Center) (Cat. #AP12560c) flow cytometric analysis of Neuro-2a cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated donkey-anti-rabbit secondary antibodies were used for the analysis.