

VARP Antibody

Catalog # ASC11001

Product Information

Application	E, IHC-P
Primary Accession	Q96NW4
Other Accession	NP_115515 , 116063534
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	116984
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	VARP antibody can be used for detection of VARP by Immunohistochemistry at 5 µg/mL.

Additional Information

Gene ID	84079
Other Names	Ankyrin repeat domain-containing protein 27, VPS9 domain-containing protein, ANKRD27
Target/Specificity	ANKRD27;
Reconstitution & Storage	VARP antibody can be stored at 4°C for three months and -20°C, 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	VARP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ANKRD27
Function	May be a guanine exchange factor (GEF) for Rab21, Rab32 and Rab38 and regulate endosome dynamics (PubMed: 16525121 , PubMed: 18477474). May regulate the participation of VAMP7 in membrane fusion events; in vitro inhibits VAMP7-mediated SNARE complex formation by trapping VAMP7 in a closed, fusogenically inactive conformation (PubMed: 23104059). Involved in peripheral melanosomal distribution of TYRP1 in melanocytes; the function, which probably is implicating vesicle-trafficking, includes cooperation with Rab32, Rab38 and VAMP7 (By similarity). Involved in the regulation of neurite growth; the function seems to require its GEF activity, probably towards Rab21, and VAMP7 but not Rab32/38 (By similarity). Proposed to be involved

in Golgi sorting of VAMP7 and transport of VAMP7 vesicles to the cell surface; the function seems to implicate kinesin heavy chain isoform 5 proteins, GOLGA4, RAB21 and MACF1 (PubMed:[22705394](#)). Required for the colocalization of VAMP7 and Rab21, probably on TGN sites (PubMed:[19745841](#)). Involved in GLUT1 endosome-to-plasma membrane trafficking; the function is dependent of association with VPS29 (PubMed:[24856514](#)). Regulates the proper trafficking of melanogenic enzymes TYR, TYRP1 and DCT/TYRP2 to melanosomes in melanocytes (By similarity).

Cellular Location

Early endosome. Late endosome. Cytoplasmic vesicle membrane. Lysosome. Cell membrane. Melanosome {ECO:0000250|UniProtKB:Q3UMR0}. Note=Colocalizes with VAMP7 in transport vesicles in the shaft of hippocampal neurons (By similarity) {ECO:0000250|UniProtKB:Q3UMR0}

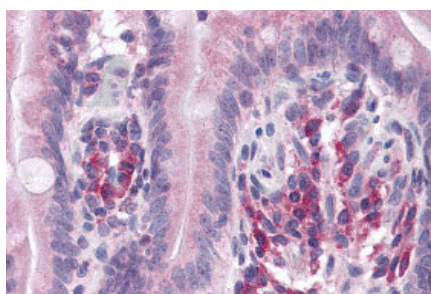
Background

VARP Antibody: The VPS9 ankyrin repeat protein (VARP) binds to the Rab21, a guanine nucleotide exchange factor that plays an essential role in endocytic trafficking. VARP localizes to early endosomes and is thought to regulate endosome dynamics. VARP also interacts with TI-VAMP/VAMP7, a vesicular SNARE that mediates an exocytic pathway that is crucial to neurite growth. Depletion of VARP by RNA interference impairs neurite growth, suggesting that VARP is a positive regulator of neurite growth.

References

Zhang X, He X, Fu XY, et al. Varp is a Rab21 guanine nucleotide exchange factor and regulates endosome dynamics. J. Cell Sci. 2006; 119:1053-62
Burgo A, Sotirakis E, Simmler MC, et al. Role of Varp, a Rab21 exchange factor and TI-VAMP/VAMP7 partner in neurite growth. EMBO Rep. 2009; 10:1117-24.
Alberts P, et al. Cross talk between tetanus neurotoxin-insensitive vesicle-associated membrane protein-mediated transport and L1-mediated adhesion. Mol. Biol. Cell 2003; 14:4207-20

Images



Immunohistochemistry of VARP in human small intestine with VARP antibody at 5 µg/mL.

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