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VPS4A Rabbit mAb

Catalog # AP76255

Product Information

Application	WB, IHC-P
Primary Accession	Q9UN37
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	48898

Additional Information

Gene ID	27183
Other Names	VPS4A
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

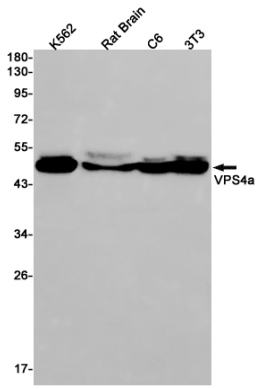
Name	VPS4A {ECO:0000312|EMBL:AAG01470.1}
Function	Involved in late steps of the endosomal multivesicular bodies (MVB) pathway. Recognizes membrane-associated ESCRT-III assemblies and catalyzes their disassembly, possibly in combination with membrane fission. Redistributes the ESCRT-III components to the cytoplasm for further rounds of MVB sorting. MVBs contain intraluminal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome and mostly are delivered to lysosomes enabling degradation of membrane proteins, such as stimulated growth factor receptors, lysosomal enzymes and lipids. It is required for proper accomplishment of various processes including the regulation of endosome size, primary cilium organization, mitotic spindle organization, chromosome segregation, and nuclear envelope sealing and spindle disassembly during anaphase (PubMed:33186545). Involved in cytokinesis: retained at the midbody by ZFYVE19/ANCHR and CHMP4C until abscission checkpoint signaling is terminated at late cytokinesis. It is then released following dephosphorylation of CHMP4C,

	leading to abscission (PubMed:24814515). VPS4A/B are required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413). Critical for normal erythroblast cytokinesis and correct erythropoiesis (PubMed:33186543).
Cellular Location	Late endosome membrane {ECO:0000250|UniProtKB:Q8VEJ9}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q8VEJ9}. Midbody Cytoplasm, cytoskeleton, spindle Note=Membrane-associated in the prevacuolar endosomal compartment Localizes to the midbody of dividing cells, interaction with ZFYVE19/ANCHR mediates retention at midbody (PubMed:24814515) Localized in two distinct rings on either side of the Flemming body
Tissue Location	Ubiquitously expressed.

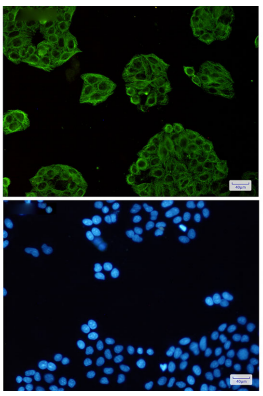
Background

The protein encoded by this gene is a member of the AAA protein family (ATPases associated with diverse cellular activities), and is the homolog of the yeast Vps4 protein. In humans, two paralogs of the yeast protein have been identified. The former share a high degree of aa sequence similarity with each other, and also with yeast Vps4 and mouse Skd1 proteins. The mouse Skd1 (suppressor of K+ transport defect 1) has been shown to be really an yeast Vps4 ortholog. Functional studies indicate that both human paralogs associate with the endosomal compartments, and are involved in intracellular protein trafficking, similar to Vps4 protein in yeast. The gene encoding this paralog has been mapped to chromosome 16; the gene for the other resides on chromosome 18.

Images

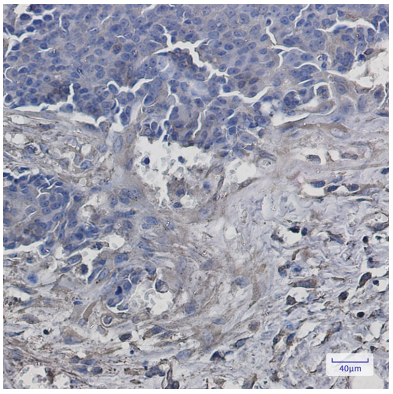


Western blot analysis of VPS4a in K562, rat Brain, C6, 3T3 lysates using VPS4A antibody.



Immunocytochemistry analysis of VPS4a(green) in Hela using VPS4a antibody,and DAPI(blue)

Immunohistochemistry analysis of paraffin-embedded Human breast cancer using VPS4a antibody.
High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



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