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GOLPH3 Antibody

Catalog # ASC10997

Product Information

Application	WB, IF, E
Primary Accession	Q9H4A6
Other Accession	AAH12123, 15082415
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	33811
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	GOLPH3 antibody can be used for detection of GOLPH3 by Western blot at 0.5 - 1 □g/mL. For immunofluorescence start at 20 □g/mL.

Additional Information

Gene ID	64083
Other Names	Golgi phosphoprotein 3, Coat protein GPP34, Mitochondrial DNA absence factor, MIDAS, GOLPH3, GPP34
Target/Specificity	GOLPH3;
Reconstitution & Storage	GOLPH3 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	GOLPH3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GOLPH3
Synonyms	GPP34
Function	Phosphatidylinositol-4-phosphate-binding protein that links Golgi membranes to the cytoskeleton and may participate in the tensile force required for vesicle budding from the Golgi. Thereby, may play a role in Golgi membrane trafficking and could indirectly give its flattened shape to the Golgi apparatus. May also bind to the coatomer to regulate Golgi membrane trafficking. May play a role in anterograde transport from the Golgi to the plasma membrane and regulate secretion. Has also been involved in the control of the localization of Golgi enzymes through interaction with their

	cytoplasmic part. May play an indirect role in cell migration. Has also been involved in the modulation of mTOR signaling. May also be involved in the regulation of mitochondrial lipids biosynthesis.
Cellular Location	Golgi apparatus, Golgi stack membrane; Peripheral membrane protein; Cytoplasmic side. Golgi apparatus, trans-Golgi network membrane; Peripheral membrane protein; Cytoplasmic side Mitochondrion intermembrane space. Cell membrane Endosome. Note=Phosphatidylinositol 4-phosphate-binding and oligomerization participate in the recruitment onto Golgi membranes.
Tissue Location	Detected in muscle fibers of patients with mitochondrial diseases; not detected in normal muscle fibers

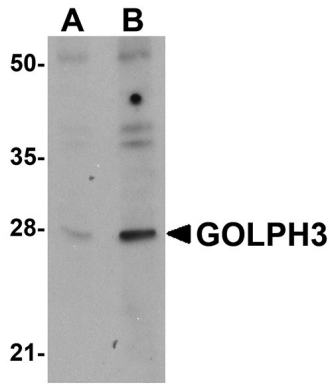
Background

GOLPH3 Antibody: GOLPH3 was initially identified as a peripheral membrane protein localized to the trans-Golgi network, but others reported it to be primarily a mitochondrial protein that regulated the mitochondrial mass through the regulation of the mitochondria-specific phospholipid cardiolipin. GOLPH3 has since been implicated in the target of rapamycin (TOR) signalling pathway. Its overexpression in transfected cells led to and increase in anchorage-independent growth and cell proliferation in vitro. Furthermore, GOLPH3-transfected cells enhanced S6 Kinase activity in response to growth factor stimulation by EGF. Simultaneously, AKT phosphorylation increased in these cells, while these events were abrogated in GOLPH3 siRNA treated cells compared to control cells, indicating the GOLPH3 can enhance signalling through TOR-associated complexes. These results suggest that GOLPH3 is a bona fide oncogene and may be a useful target for therapeutic strategies.

References

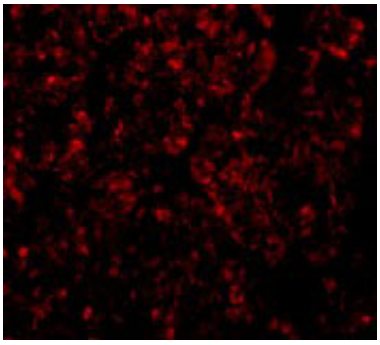
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Nakashima-Kamimura N, Asoh S, Ishibashi Y, et al. MIDAS/GPP34, a nuclear gene product, regulates total mitochondrial mass in response to mitochondrial dysfunction. J. Cell Sci.2005; 118:5357-67.
Scott KL, Kabbarah O, Liang M-C, et al. GOLPH3 modulates mTOR signalling and rapamycin sensitivity in cancer. Nature2009; 459:1085-90.

Images



Western blot analysis of GOLPH3 in rat lung tissue lysate with GOLPH3 antibody at (A) 0.5 and (B) 1 µg/mL.

Immunofluorescence of GOLPH3 in Rat Lung cells with GOLPH3 antibody at 20 µg/mL.



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