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GOLPH1 Antibody

Catalog # ASC10995

Product Information

Application	WB, E
Primary Accession	Q9H3P7
Other Accession	EAW69775, 119590181
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	60593
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	GOLPH1 antibody can be used for detection of GOLPH1 by Western blot at 1 - 2 □g/mL.

Additional Information

Gene ID	64746
Other Names	Golgi resident protein GCP60, Acyl-CoA-binding domain-containing protein 3, Golgi complex-associated protein 1, GOCAP1, Golgi phosphoprotein 1, GOLPH1, PBR- and PKA-associated protein 7, Peripheral benzodiazepine receptor-associated protein PAP7, ACBD3, GCP60, GOCAP1, GOLPH1
Target/Specificity	ACBD3;
Reconstitution & Storage	GOLPH1 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	GOLPH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ACBD3
Synonyms	GCP60, GOCAP1, GOLPH1
Function	Involved in the maintenance of Golgi structure by interacting with giantin, affecting protein transport between the endoplasmic reticulum and Golgi (PubMed:11590181). Involved in hormone-induced steroid biosynthesis in testicular Leydig cells (By similarity). Recruits PI4KB to the Golgi apparatus membrane; enhances the enzyme activity of PI4KB activity via its membrane recruitment thereby increasing the local concentration of the substrate in the

vicinity of the kinase (PubMed:27009356).

Cellular Location	Golgi apparatus membrane; Peripheral membrane protein; Cytoplasmic side. Mitochondrion. Note=Also mitochondrial (via its interaction with PBR).
Tissue Location	Ubiquitous, with highest expression in testis and ovary.

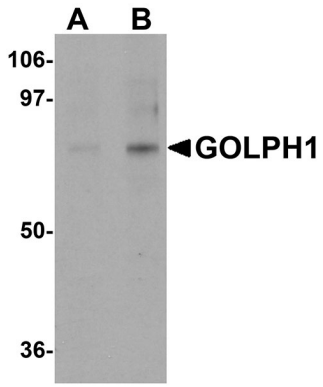
Background

GOLPH1 Antibody: GOLPH1, also known as GCP60, was initially identified as a Golgi protein that can interact with the integral membrane protein giantin and is thought to be involved in the maintenance of the Golgi structure. GOLPH1 has also been shown to interact with other Golgi proteins such as Golgin-160, a Golgi protein that can be cleaved by caspases-2, -3, and -7, leading to the nuclear localization of Golgin-160. GOLPH1 interaction with the Golgin-160 fragments is stronger than that with the intact Golgin-160, with its interaction regulated by the oxidation state of Cys-463 within GOLPH1, suggesting that the nuclear localization of the caspase-cleaved Golgin-160 fragments is a highly coordinated event. GOLPH1 has also been found to interact with Numb, a cytosolic signaling protein that mediates asymetric cell division of neural progenitor cells to a daughter progenitor cell and a neuron, suggesting that Golgi fragmentation and reconstitution during the cell cycle differentially regulate Numb signaling through changes in GOLPH1 subcellular distribution and may couple cell fate with cell cycle progression.

References

Sohda M, Misumi Y, Yamamoto A, et al. Identification and characterization of a novel Golgi protein, GCP60, that interacts with the integral membrane protein giantin. J. Biol. Chem.2001; 276:45298-306.
Mancini M, Machamer CE, Roy S, et al. Caspase-2 is localized at the Golgi complex and cleaves golgin-160 during apoptosis. J. Cell Biol.2000; 149:603-12.
Sbodio JI and Machamer CE. Identification of a redox-sensitive cysteine in GCP60 that regulates its interaction with Golgin-160. J. Biol. Chem.2007; 282:29874-81.
Zhou Y, Atkins JB, Rompani SB, et al. The mammalian Golgi regulates numb signaling in asymetric cell division by releasing ACBD3 during mitosis. Cell2007; 129:163-78.

Images



Western blot analysis of GOLPH1 in K562 cell lysate with GOLPH1 antibody at (A) 1 and (B) 2 µg/mL.