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ALG14 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8903c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q96F25
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22375
Calculated MW	24151
Antigen Region	67-93

Additional Information

Gene ID	199857
Other Names	UDP-N-acetylglucosamine transferase subunit ALG14 homolog, ALG14
Target/Specificity	This ALG14 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 67-93 amino acids from the Central region of human ALG14.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	ALG14 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALG14 (HGNC:28287)
Function	Part of the UDP-N-acetylglucosamine transferase complex that operates in the biosynthetic pathway of dolichol-linked oligosaccharides, the glycan precursors employed in protein asparagine (N)-glycosylation. The assembly of dolichol-linked oligosaccharides begins on the cytosolic side of the

endoplasmic reticulum membrane and finishes in its lumen. The sequential addition of sugars to dolichol pyrophosphate produces dolichol-linked oligosaccharides containing fourteen sugars, including two GlcNAcs, nine mannoses and three glucoses. Once assembled, the oligosaccharides are transferred from the lipid to nascent proteins by oligosaccharyltransferases. Functions as a protein-membrane adapter recruiting ALG13 at the cytoplasmic face of the endoplasmic reticulum, where the complex catalyzes the second step of dolichol pyrophosphate biosynthesis, transferring a beta1,4-linked N-acetylglucosamine (GlcNAc) from UDP-GlcNAc to GlcNAc-pyrophosphatedolichol (Gn-PDol) to produce N,N'-diacetylchitobiosyl diphosphodolichol. N,N'-diacetylchitobiosyl diphosphodolichol is a substrate for ALG1, the following enzyme in the biosynthetic pathway.

Cellular Location Endoplasmic reticulum membrane; Single-pass membrane protein

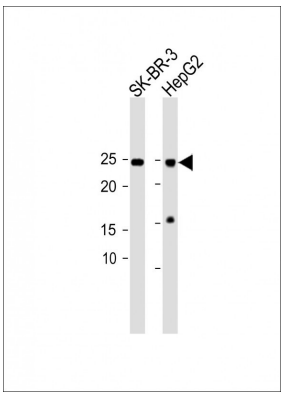
Background

ALG14 is involved in protein N-glycosylation. It is essential for the second step of the dolichol-linked oligosaccharide pathway. It anchors the catalytic subunit ALG13 to the ER.

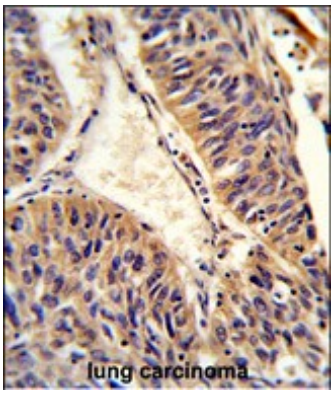
References

Gao X.-D., et.al., J. Biol. Chem. 280:36254-36262(2005).

Images

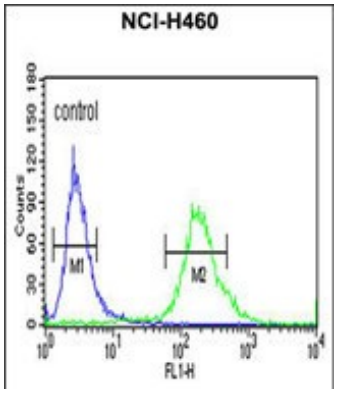


All lanes: Anti-ALG14 Antibody (Center) at 1:1000 dilution Lane 1: SK-BR-3 whole cell lysate Lane 2: HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 24. 2 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



Formalin-fixed and paraffin-embedded human lung carcinoma reacted with ALG14 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ALG14 Antibody (Center) (Cat. #AP8903c) flow cytometric analysis of NCI-H460 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Citations

- Congenital myasthenic syndromes due to mutations in ALG2 and ALG14.