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ALG2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17233c

Product Information

Application	WB, E
Primary Accession	Q9H553
Other Accession	NP_149078.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36980
Calculated MW	47092
Antigen Region	254-282

Additional Information

Gene ID	85365
Other Names	Alpha-1, 3/1, 6-mannosyltransferase ALG2, Asparagine-linked glycosylation protein 2 homolog, GDP-Man:Man(1)GlcNAc(2)-PP-Dol alpha-1, 3-mannosyltransferase, GDP-Man:Man(1)GlcNAc(2)-PP-dolichol mannosyltransferase, GDP-Man:Man(2)GlcNAc(2)-PP-Dol alpha-1, 6-mannosyltransferase, ALG2
Target/Specificity	This ALG2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 254-282 amino acids from the Central region of human ALG2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	ALG2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ALG2

Function	Mannosyltransferase 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 oligosaccharide is transferred from the lipid to nascent proteins by oligosaccharyltransferases. Catalyzes, on the cytoplasmic face of the endoplasmic reticulum, the addition of the second and third mannose residues to the dolichol-linked oligosaccharide chain, to produce Man3GlcNAc(2)-PP-dolichol core oligosaccharide. Man3GlcNAc(2)-PP- dolichol is a substrate for ALG11, the following enzyme in the biosynthetic pathway (PubMed:12684507, PubMed:35136180). While both alpha 1,3 and alpha 1,6 linkages are possible, the sequential addition of alpha 1,3 followed by alpha 1,6 is probably the preferred route (PubMed:35136180).
Cellular Location	Endoplasmic reticulum membrane; Single-pass membrane protein. Note=Active on cytoplasmic side of endoplasmic reticulum membrane.

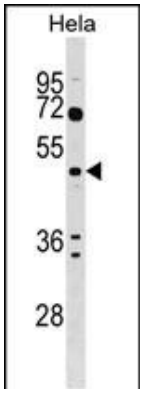
Background

This gene encodes a member of the glycosyltransferase 1 family. The encoded protein acts as an alpha 1,3 mannosyltransferase, mannosylating Man(2)GlcNAc(2)-dolichol diphosphate and Man(1)GlcNAc(2)-dolichol diphosphate to form Man(3)GlcNAc(2)-dolichol diphosphate. Defects in this gene have been associated with congenital disorder of glycosylation type Ih (CDG-Ii). Alternative splicing results in multiple transcript variants.

References

Inuzuka, T., et al. BMC Struct. Biol. 10, 25 (2010) :
Okumura, M., et al. Biochem. Biophys. Res. Commun. 386(1):237-241(2009)
Hoj, B.R., et al. Biochem. Biophys. Res. Commun. 378(1):145-148(2009)
Mahul-Mellier, A.L., et al. J. Biol. Chem. 283(50):34954-34965(2008)
la Cour, J.M., et al. Mol Oncol 1(4):431-439(2008)

Images



ALG2 Antibody (Center) (Cat. #AP17233c) western blot analysis in Hela cell line lysates (35ug/lane).This demonstrates the ALG2 antibody detected the ALG2 protein (arrow).