SANTA CRUZ BIOTECHNOLOGY, INC.

ALG12 (Q16): sc-100507

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

ALG12 (asparagine-linked glycosylation 12 homolog), also known as ECM39 or membrane protein SB87, is a 488 amino acid member of the glycosyltransferase 22 family that functions as a mannosyltransferase required for proper protein glycosylation. ALG12 is a multi-pass membrane protein that is expressed in fibroblasts and localizes to the endoplasmic reticulum (ER). Specifically, ALG12 catalyzes the addition of α1, 6 mannose to dolichol-linked $Man_7GlcNAc_2$. Defects in ALG12 disrupt protein N-glycosylation and result in congenital disorder of glycosylation type 1G (CDG1G). CDG1G is a multi-system disease characterized by under-glycosylated serum proteins. N-glycoproteins play important roles in cell maintenance, embryonic development and differentiation. A disease affecting the proper function of these proteins can lead to coagulation disorders, psychomotor retardation, hypotonia, immunodeficiency and dysmorphic features.

REFERENCES

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6. Leal, S., et al. 2004. Transposon mutagenesis of *Trypanosoma brucei* identifies glycosylation mutants resistant to concanavalin A. J. Biol. Chem. 279: 28979-28988.
7. Belanger, K.D., et al. 2005. Nuclear pore complex function in *Saccharomyces cerevisiae* is influenced by glycosylation of the transmembrane nucleoporin Pom152p. Genetics 171: 935-947.
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CHROMOSOMAL LOCATION

Genetic locus: ALG12 (human) mapping to 22q13.33; Alg12 (mouse) mapping to 15 E3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

ALG12 (Q16) is a mouse monoclonal antibody raised against recombinant ALG12 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 kappa light chain in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ALG12 (Q16) is recommended for detection of ALG12 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ALG12 siRNA (h): sc-72484, ALG12 siRNA (m): sc-141012, ALG12 shRNA Plasmid (h): sc-72484-SH, ALG12 shRNA Plasmid (m): sc-141012-SH, ALG12 shRNA (h) Lentiviral Particles: sc-72484-V and ALG12 shRNA (m) Lentiviral Particles: sc-141012-V.

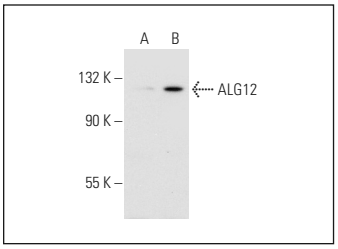
Molecular Weight of ALG12: 55 kDa.

Positive Controls: ALG12 (m): 293T Lysate: sc-118353 or HeLa whole cell lysate: sc-2200.

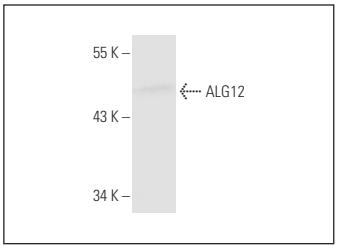
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



ALG12 (Q16): sc-100507. Western blot analysis of ALG12 expression in non-transfected: sc-117752 (**A**) and mouse ALG12 transfected: sc-118353 (**B**) 293T whole cell lysates.



ALG12 (Q16): sc-100507. Western blot analysis of ALG12 expression in HeLa whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.