SANTA CRUZ BIOTECHNOLOGY, INC.

ALG11 (E-17): sc-83969

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

ALG11 (asparagine-linked glycosylation 11), also known as GT8 or UTP14C, is a 492 amino acid multi-pass membrane proteins that is thought to play a role in spermatogenesis and is encoded by a gene which maps to chromosome 13. Comprising nearly 4% of the human genome, chromosome 13 contains around 114 million base pairs and encodes over 400 genes. Chromosome 13 houses key tumor suppressor genes, including BRCA2 and RB1, which are associated with breast cancer susceptibility and retinoblastoma, respectively. Trisomy 13, also known as Patau syndrome, is deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

REFERENCES

1. Cipollo, J.F., et al. 2001. The yeast ALG11 gene specifies addition of the terminal α 1,2-Man to the Man5GlcNAc2-PP-dolichol N-glycosylation intermediate formed on the cytosolic side of the endoplasmic reticulum. J. Biol. Chem. 276: 21828-21840.
2. Gao, X.D., et al. 2004. Physical interactions between the ALG1, ALG2, and ALG11 mannosyltransferases of the endoplasmic reticulum. Glycobiology 14: 559-570.
3. Dunham, A., et al. 2004. The DNA sequence and analysis of human chromosome 13. Nature 428: 522-528.
4. O'Reilly, M.K., et al. 2006. *In vitro* evidence for the dual function of ALG2 and ALG11: essential mannosyltransferases in N-linked glycoprotein biosynthesis. Biochemistry 45: 9593-9603.
5. Rohozinski, J., et al. 2006. UTP14c is a recently acquired retrogene associated with spermatogenesis and fertility in man. Biol. Reprod. 74: 644-651.
6. Bugge, M., et al. 2007. Non-disjunction of chromosome 13. Hum. Mol. Genet. 16: 2004-2010.
7. Hall, H.E., et al. 2007. The origin of trisomy 13. Am. J. Med. Genet. A 143: 2242-2248.
8. Hassler, M., et al. 2007. Crystal structure of the retinoblastoma protein N domain provides insight into tumor suppression, ligand interaction and holoprotein architecture. Mol. Cell 28: 371-385.

CHROMOSOMAL LOCATION

Genetic locus: ALG11 (human) mapping to 13q14.3; Alg11 (mouse) mapping to 8 A2.

SOURCE

ALG11 (E-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of ALG11 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83969 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ALG11 (E-17) is recommended for detection of ALG11 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ALG11 (E-17) is also recommended for detection of ALG11 in additional species, including equine, canine, porcine and avian.

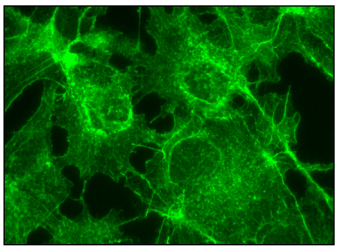
Suitable for use as control antibody for ALG11 siRNA (h): sc-105053, ALG11 siRNA (m): sc-141011, ALG11 shRNA Plasmid (h): sc-105053-SH, ALG11 shRNA Plasmid (m): sc-141011-SH, ALG11 shRNA (h) Lentiviral Particles: sc-105053-V and ALG11 shRNA (m) Lentiviral Particles: sc-141011-V.

Molecular Weight of ALG11: 56 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



ALG11 (E-17): sc-83969. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane localization.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.