SANTA CRUZ BIOTECHNOLOGY, INC.

# ALG9 (Y-12): sc-109496

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*The Power to Question*

## BACKGROUND

Glycosylation of asparagine residues is an essential protein modification reaction that occurs upon most proteins that enter the secretory pathway in eukaryotic cells. Asparagine-linked oligosaccharides are transferred onto polypeptides in the lumen of the rough endoplasmic reticulum. ALG9 (asparagine-linked glycosylation 9, $\alpha$-1,2-mannosyltransferase homolog), also known as DIBD1, is a 611 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum. Ubiquitously expressed, with highest levels in heart, liver and pancreas, ALG9 catalyzes the transfer of mannose from Dol-P-Man to lipid-linked oligosaccharides. Defects in the gene encoding ALG9 may be caused by congenital disorder of glycosylation type 1L (CDG1L). CDGs are a family of severe inherited diseases, including psychomotor retardation, dysmorphic features, hypotonia, coagulation disorders and immunodeficiency, caused by a defect in protein N-glycosylation and are characterized by under-glycosylated serum proteins. Four isoforms of ALG9 exist due to alternative splicing events.

## REFERENCES


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3. Uchimura, S., et al. 2005. Effects of N-glycosylation and inositol on the ER stress response in yeast *Saccharomyces cerevisiae*. Biosci. Biotechnol. Biochem. 69: 1274-1280.
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## CHROMOSOMAL LOCATION

Genetic locus: ALG9 (human) mapping to 11q23.1; Alg9 (mouse) mapping to 9 A5.3.

## SOURCE

ALG9 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ALG9 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-109496 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ALG9 (Y-12) is recommended for detection of ALG9 isoforms 1 and 3 of mouse, rat 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); non cross-reactive with ALG9 isoforms 2 or 4.

ALG9 (Y-12) is also recommended for detection of ALG9 isoforms 1 and 3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for ALG9 siRNA (h): sc-96648, ALG9 siRNA (m): sc-141017, ALG9 shRNA Plasmid (h): sc-96648-SH, ALG9 shRNA Plasmid (m): sc-141017-SH, ALG9 shRNA (h) Lentiviral Particles: sc-96648-V and ALG9 shRNA (m) Lentiviral Particles: sc-141017-V.

Molecular Weight of ALG9: 70 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.