SANTA CRUZ BIOTECHNOLOGY, INC.

COG8 (S-12): sc-136627

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The Power to Question

BACKGROUND

The structure and function of the Golgi apparatus is controlled by a number of multi-protein complexes that are involved in glycosylation reactions and vesicular transport. The conserved oligomeric Golgi (COG) complex consists of three subcomplexes, termed LDLC, SEC34 and GTT (Golgi transport complex), all of which contain proteins necessary for proper Golgi operation. COG8 (conserved oligomeric Golgi complex subunit 8), also known as component of oligomeric Golgi complex 8, DOR1 or CDG2H, is a 612 amino acid peripheral membrane protein that is required for normal Golgi function and is a member of the COG8 family. Defects in the gene encoding COG8 are associated with congenital disorder of glycosylation type 2H (CDG2H), an inherited disorder that leads to under-glycosylation of serum proteins.

REFERENCES

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2. Loh, E., et al. 2002. Sec34 is implicated in traffic from the endoplasmic reticulum to the Golgi and exists in a complex with GTC-90 and ldlBp. J. Biol. Chem. 277: 21955-21961.
3. Ungar, D., et al. 2002. Characterization of a mammalian Golgi-localized protein complex, COG, that is required for normal Golgi morphology and function. J. Cell Biol. 157: 405-415.
4. Foulquier, F., et al. 2007. A new inborn error of glycosylation due to a Cog8 deficiency reveals a critical role for the Cog1-Cog8 interaction in COG complex formation. Hum. Mol. Genet. 16: 717-730.
5. Kranz, C., et al. 2007. COG8 deficiency causes new congenital disorder of glycosylation type IIh. Hum. Mol. Genet. 16: 731-741.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 606979. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Smith, R.D., et al. 2008. Role of the conserved oligomeric Golgi (COG) complex in protein glycosylation. Carbohydr. Res. 343: 2024-2031.

CHROMOSOMAL LOCATION

Genetic locus: COG8 (human) mapping to 16q22.1; Cog8 (mouse) mapping to 8 D3.

SOURCE

COG8 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COG8 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-136627 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COG8 (S-12) is recommended for detection of COG8 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 other COG family members.

COG8 (S-12) is also recommended for detection of COG8 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for COG8 siRNA (h): sc-93542, COG8 siRNA (m): sc-142456, COG8 shRNA Plasmid (h): sc-93542-SH, COG8 shRNA Plasmid (m): sc-142456-SH, COG8 shRNA (h) Lentiviral Particles: sc-93542-V and COG8 shRNA (m) Lentiviral Particles: sc-142456-V.

Molecular Weight of COG8: 68 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.