SANTA CRUZ BIOTECHNOLOGY, INC.

# COG7 (h): 293T Lysate: sc-114931

## 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. COG7 (conserved oligomeric Golgi complex component 7), also known as CDG2E, is a 770 amino acid peripheral membrane protein. One of several members of the COG complex, COG7 is necessary for normal Golgi function, namely maintaining Golgi structure and mediating vesicle docking and fusion. Defects in the gene encoding COG7 are the cause of congenital disorder of glycosylation type 2E (CDG2E), an inherited defect in N-glycosylation that results in under-glycosylated serum proteins and is characterized by psychomotor retardation, hypotonia, coagulation disorders and immunodeficiency.

## REFERENCES


1. 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.
2. Wu, X., et al. 2004. Mutation of the COG complex subunit gene COG7 causes a lethal congenital disorder. Nat. Med. 10: 518-523.
3. Oka, T., et al. 2005. Genetic analysis of the subunit organ-ization and function of the conserved oligomeric Golgi (COG) complex: studies of COG5- and COG7-deficient mammalian cells. J. Biol. Chem. 280: 32736-32745.
4. Steet, R. and Kornfeld, S. 2006. COG-7-deficient human fibroblasts exhibit altered recycling of Golgi proteins. Mol. Biol. Cell 17: 2312-2321.
5. Shestakova, A., et al. 2006. COG complex-mediated recycling of Golgi glycosyltransferases is essential for normal protein glycosylation. Traffic 7: 191-204.
6. Morava, E., et al. 2007. A common mutation in the COG7 gene with a consistent phenotype including microcephaly, adducted thumbs, growth retardation, VSD and episodes of hyperthermia. Eur. J. Hum. Genet. 15: 638-645.
7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 606978. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/


## CHROMOSOMAL LOCATION

Genetic locus: COG7 (human) mapping to 16p12.2.

## PRODUCT

COG7 (h): 293T Lysate represents a lysate of human COG7 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## APPLICATIONS

COG7 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive COG7 antibodies. Recommended use: 10-20 µl per lane.

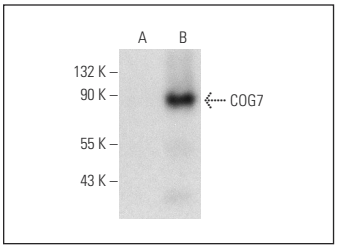
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

COG7 (G-1): sc-271699 is recommended as a positive control antibody for Western Blot analysis of enhanced human COG7 expression in COG7 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

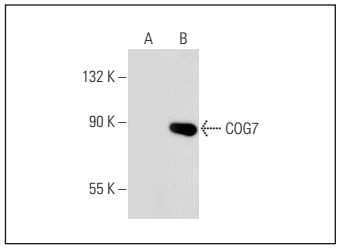
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA




COG7 (G-1): sc-271699. Western blot analysis of COG7 expression in non-transfected: sc-117752 (**A**) and human COG7 transfected: sc-114931 (**B**) 293T whole cell lysates.




COG7 (L-06): sc-101279. Western blot analysis of COG7 expression in non-transfected: sc-117752 (**A**) and human COG7 transfected: sc-114931 (**B**) 293T whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

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