



COPG (h): 293 Lysate: sc-113185

BACKGROUND

Membrane and vesicular trafficking in the early secretory pathway are mediated by non-clathrin COP (coat protein) I-coated vesicles. COPI-coated vesicles mediate retrograde transport from the Golgi back to the ER and intra-Golgi transport. The cytosolic precursor of the COPI coat, the heptameric coatomer complex, is composed of two subcomplexes. The first consists of the COPB, COPG, COPD and COPZ subunits (also known as β -, γ -, δ - and ζ -COP, respectively), which are distantly homologous to AP Clathrin adaptor subunits. The second consists of the COPA, β' -COP and COPE subunits (also known as α -COP, COPP and ϵ -COP, respectively). The COPG (β -COP) subunit of the coatomer is believed to mediate the binding to the cytoplasmic dilysine motifs of membrane proteins. COPG has the highest level of expression in mouse testis, and is expressed in a parent-of-origin-specific manner in mammals.

REFERENCES

1. Stenbeck, G., Schreiner, R., Herrmann, D., Auerbach, S., Lottspeich, F., Rothman, J.E. and Wieland, F.T. 1992. γ -COP, a COAT subunit of non-clathrin-coated vesicles with homology to Sec21p. *FEBS Lett.* 314: 195-198.
2. Lowe, M. and Kreis, T.E. 1995. *In vitro* assembly and disassembly of coatomer. *J. Biol. Chem.* 270: 31364-31371.
3. Harter, C. and Wieland, F.T. 1998. A single binding site for dilysine retrieval motifs and p23 within the γ subunit of coatomer. *Proc. Natl. Acad. Sci. USA* 95: 11649-11654.
4. Hahn, Y., Lee, Y.J., Yun, J.H., Yang, S.K., Park, C.W., Mita, K., Huh, T.L., Rhee, M. and Chung, J.H. 2000. Duplication of genes encoding non-clathrin coat protein γ -COP in vertebrate, insect and plant evolution. *FEBS Lett.* 482: 31-36.
5. Futatsumori, M., Kasai, K., Takatsu, H., Shin, H.W. and Nakayama, K. 2000. Identification and characterization of novel isoforms of COP I subunits. *J. Biochem.* 128: 793-801.
6. Bermak, J.C., Li, M., Bullock, C., Weingarten, P. and Zhou, Q.Y. 2002. Interaction of γ -COP with a transport motif in the D1 receptor C-terminus. *Eur. J. Cell Biol.* 81: 77-85.
7. Watson, P.J., Frigerio, G., Collins, B.M., Duden, R. and Owen, D.J. 2004. γ -COP appendage domain—structure and function. *Traffic* 5: 79-88.
8. SWISS-PROT/TrEMBL (P48444). World Wide Web URL: <http://harvester.embl.de/harvester/P484/P48444.htm>

CHROMOSOMAL LOCATION

Genetic locus: COPG1 (human) mapping to 3q21.3.

PRODUCT

COPG (h): 293 Lysate represents a lysate of human COPG transfected 293 cells and is provided as 100 μ g protein in 200 μ l 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

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

Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

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.