

COPG (K-16): sc-23201

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), which are distantly homologous to AP Clathrin adaptor subunits. The second consists of the COPA, COPP and COPE subunits (also known as α -, β' - and ϵ -COP, respectively). The COPG (γ -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., et al. 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. Futatsumori, M., et al. 2000. Identification and characterization of novel isoforms of COPI subunits. J. Biochem. 128: 793-801.
5. Hahn, Y., et al. 2000. Duplication of genes encoding non-clathrin coat protein γ -COP in vertebrate, insect and plant evolution. FEBS Lett. 482: 31-36.
6. Bermak, J.C., et al. 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., et al. 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: COPG (human) mapping to 3q21.3, COPG2 (human) mapping to 7q32.2; Copg (mouse) mapping to 6 D1, Copg2 (mouse) mapping to 6 A3.3.

SOURCE

COPG (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of COPG of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-23201 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COPG (K-16) is recommended for detection of COPG (also designated γ -COP) and γ 2-COP 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).

COPG (K-16) is also recommended for detection of COPG (also designated γ -COP) and γ 2-COP in additional species, including equine, canine, bovine and porcine.

Molecular Weight of COPG: 97 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, 3T3-L1 cell lysate: sc-2243 or Sol8 cell lysate: sc-2249.

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.