SANTA CRUZ BIOTECHNOLOGY, INC.

COPG (C-19): sc-14167

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 dissembly of coatomer. J. Biol. Chem. 270: 31364-31371.

CHROMOSOMAL LOCATION

Genetic locus: COPG1 (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 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of COPG of mouse 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-14167 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COPG (C-19) is recommended for detection of COPG (also designated γCOP) and, to a lesser extent, γ2-COP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (C-19) is also recommended for detection of COPG (also designated γCOP) and, to a lesser extent, γ2-COP in additional species, including equine, canine, bovine and porcine.

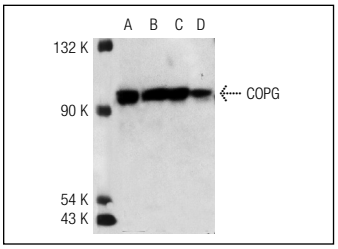
Molecular Weight of COPG: 97 kDa.

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

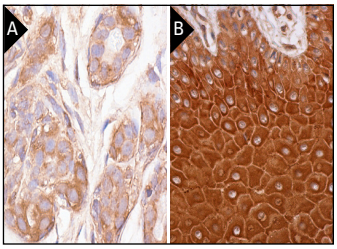
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



COPG (C-19): sc-14167. Western blot analysis of COPG expression in 3T3-L1 (**A**), Sol 8 (**B**), KNRK (**C**) and K-562 (**D**) whole cell lysates.



COPG (C-19): sc-14167. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tissue showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing cytoplasmic staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Rohde, H.M., et al. 2003. The human phosphatidylinositol phosphatase SAC1 interacts with the coatomer I complex. J. Biol. Chem. 278: 52689-52699.
2. Cauvi, D.M., et al. 2006. Transport of the IgE receptor α-chain is controlled by a multicomponent intracellular retention signal. J. Biol. Chem. 281: 10448-10460.
3. Shao, C., et al. 2010. Shotgun proteomic analysis of hibernating arctic ground squirrels. Mol. Cell. Proteomics 9: 313-326.
4. Zhang, X., et al. 2012. Dopamine receptor D3 regulates endocytic sorting by a Prazosin-sensitive interaction with the coatomer COPI. Proc. Natl. Acad. Sci. USA 109: 12485-12490.
5. Todd, A.G., et al. 2013. COPI transport complexes bind to specific RNAs in neuronal cells. Hum. Mol. Genet. 22: 729-736.

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.