SANTA CRUZ BIOTECHNOLOGY, INC.

COPE (A-4): sc-133195

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, 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).

REFERENCES

1. Lowe, M. and Kreis, T.E. 1995. *In vitro* assembly and dissembly of coatomer. J. Biol. Chem. 270: 31364-31371.
2. Daro, E., et al. 1997. Inhibition of endosome function in CHO cells bearing a temperature-sensitive defect in the coatomer (COPI) component ε-COP. J. Cell Biol. 139: 1747-1759.
3. Duden, R., et al. 1998. ε-COP is a structural component of coatomer that functions to stabilize α-COP. EMBO J. 17: 985-995.
4. 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.
5. Andersson, H., et al. 1999. Protein targeting to endoplasmic reticulum by dilysine signals involves direct retention in addition to retrieval. J. Biol. Chem. 274: 15080-15084.

CHROMOSOMAL LOCATION

Genetic locus: COPE (human) mapping to 19p13.11; Cope (mouse) mapping to 8 B3.3.

SOURCE

COPE (A-4) is a mouse monoclonal antibody raised against amino acids 111-190 of COPE of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

COPE (A-4) is available conjugated to agarose (sc-133195 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133195 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133195 PE), fluorescein (sc-133195 FITC), Alexa Fluor® 488 (sc-133195 AF488), Alexa Fluor® 546 (sc-133195 AF546), Alexa Fluor® 594 (sc-133195 AF594) or Alexa Fluor® 647 (sc-133195 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133195 AF680) or Alexa Fluor® 790 (sc-133195 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

COPE (A-4) is recommended for detection of COPE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for COPE siRNA (h): sc-41198, COPE siRNA (m): sc-41199, COPE shRNA Plasmid (h): sc-41198-SH, COPE shRNA Plasmid (m): sc-41199-SH, COPE shRNA (h) Lentiviral Particles: sc-41198-V and COPE shRNA (m) Lentiviral Particles: sc-41199-V.

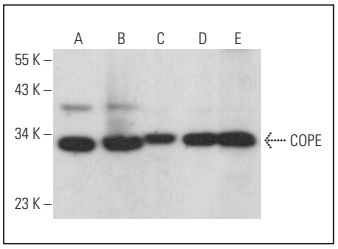
Molecular Weight of COPE: 36 kDa.

Positive Controls: rat prostate extract: sc-364809, AT3B-1 whole cell lysate: sc-364372 or F9 cell lysate: sc-2245.

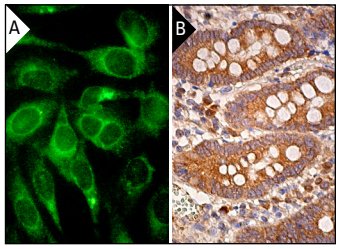
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



COPE (A-4): sc-133195. Western blot analysis of COPE expression in U266 (**A**), A-375 (**B**), F9 (**C**) and AT3B-1 (**D**) whole cell lysates and rat prostate tissue extract (**E**).



COPE (A-4): sc-133195. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Steiner, A., et al. 2022. Deficiency in coatomer complex I causes aberrant activation of STING signalling. Nat. Commun. 13: 2321.

STORAGE

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