

COPE (C-4): sc-133194

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 disassembly 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.
6. Chow, C.W., et al. 1999. The epithelial Na^+/H^+ exchanger, NHE3, is internalized through a clathrin-mediated pathway. J. Biol. Chem. 274: 37551-37558.
7. Kimata, Y., et al. 2000. Impaired proteasome function rescues thermo-sensitivity of yeast cells lacking the coatomer subunit ϵ -COP. J. Biol. Chem. 275: 10655-10660.

CHROMOSOMAL LOCATION

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

SOURCE

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

PRODUCT

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

STORAGE

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

APPLICATIONS

COPE (C-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) 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.

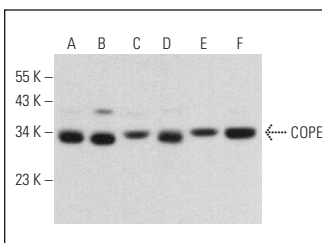
Molecular Weight of COPE: 36 kDa.

Positive Controls: DU 145 cell lysate: sc-2268, PC-12 cell lysate: sc-2250 or M1 whole cell lysate: sc-364782.

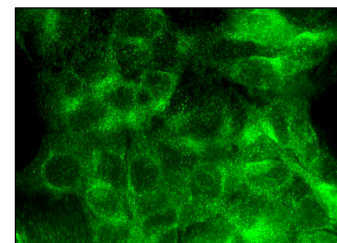
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



COPE (C-4): sc-133194. Western blot analysis of COPE expression in DU 145 (A), A2058 (B), P19 (C), OVCA3 (D), M1 (E) and PC-12 (F) whole cell lysates.



COPE (C-4): sc-133194. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Shaiken, T.E. and Opekun, A.R. 2014. Dissecting the cell to nucleus, perinucleus and cytosol. Sci. Rep. 4: 4923.
2. Torres, A.A., et al. 2022. The actin nucleator Spir-1 is a virus restriction factor that promotes innate immune signalling. PLoS Pathog. 18: e1010277.

RESEARCH USE

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