SANTA CRUZ BIOTECHNOLOGY, INC.

COPD (A-3): sc-514104

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., et al. 1995. *In vitro* assembly and dissembly of coatomer. J. Biol. Chem. 270: 31364-31371.
2. Faulstich, D., et al. 1996. Architecture of coatomer: molecular characterization of δ-COP and protein interactions within the complex. J. Cell Biol. 135: 53-61.
3. Tunnacliffe, A., et al. 1996. The coatomer protein δ-COP, encoded by the archain gene, is conserved across diverse eukaryotes. Mamm. Genome 7: 784-786.
4. Cosson, P., et al. 1996. δ- and ζ-COP, two coatomer subunits homologous to clathrin-associated proteins, are involved in ER retrieval. EMBO J. 15: 1792-1798.
5. Chaudhary, A., et al. 1998. Specific interaction of Golgi coatomer protein α-COP with phosphatidylinositol 3,4,5-trisphosphate. J. Biol. Chem. 273: 8344-8350.
6. Harter, C., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: ARCN1 (human) mapping to 11q23.3; Arcn1 (mouse) mapping to 9 A5.2.

SOURCE

COPD (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 377-401 near the C-terminus of COPD 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.

Blocking peptide available for competition studies, sc-514104 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

COPD (A-3) is recommended for detection of COPD 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 COPD siRNA (h): sc-106917, COPD siRNA (m): sc-142502, COPD shRNA Plasmid (h): sc-106917-SH, COPD shRNA Plasmid (m): sc-142502-SH, COPD shRNA (h) Lentiviral Particles: sc-106917-V and COPD shRNA (m) Lentiviral Particles: sc-142502-V.

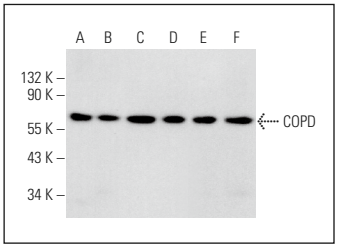
Molecular Weight of COPD: 57 kDa.

Positive Controls: COPD (m5): 293T Lysate: sc-119397, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

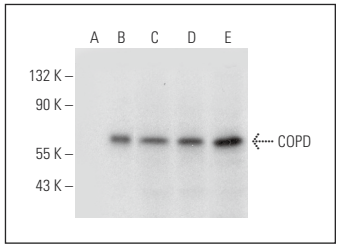
RECOMMENDED SUPPORT REAGENTS

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.

DATA



COPD (A-3): sc-514104. Western blot analysis of COPD expression in MCF7 (**A**), A2058 (**B**), MDA-MB-435S (**C**), NTERA-2 cl.D1 (**D**), EOC 20 (**E**) and C6 (**F**) whole cell lysates.



COPD (A-3): sc-514104. Western blot analysis of COPD expression in non-transfected 293T: sc-117752 (**A**), mouse COPD transfected 293T: sc-119397 (**B**), NIH/3T3 (**C**), HeLa (**D**) and NCI-H1299 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Miyamoto, Y., et al. 2018. BIG1/Arfgef1 and Arf1 regulate the initiation of myelination by Schwann cells in mice. Sci. Adv. 4: eaar4471.
2. Wouters, R., et al. 2021. Assembly of γ-secretase occurs through stable dimers after exit from the endoplasmic reticulum. J. Cell Biol. 220: e201911104.

RESEARCH USE

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