

# copine 9 (D-6): sc-376604

## BACKGROUND

Copine 9, also known as CPNE9, copine-9, CPN9 or COPN9, is a 503 amino acid member of the copine family of evolutionarily conserved, soluble, calcium-dependent, membrane-binding proteins. Members of the copine family are involved in signal transduction and membrane trafficking. Arabidopsis thaliana mutants lacking copine proteins exhibit reduced cell number and smaller cell size, effects which may be due to a defect in vesicle fusion or transport. Copine 9 contains two N-terminal C2 domains and one C-terminal VWFA (von Willebrand factor A) domain, which is also referred to as the A domain or the core domain. As is characteristic of the copine family, copine 9 functions in membrane trafficking and is capable of binding phospholipids in a calcium-dependent manner.

## REFERENCES

- Creutz, C.E., et al. 1998. The copines, a novel class of C2 domain-containing, calcium-dependent, phospholipid-binding proteins conserved from *Paramecium* to humans. *J. Biol. Chem.* 273: 1393-1402.
- Caudell, E.G., et al. 2000. Characterization of human copine III as a phosphoprotein with associated kinase activity. *Biochemistry* 39: 13034-13043.
- Tomsig, J.L. and Creutz, C.E. 2000. Biochemical characterization of copine: a ubiquitous Ca<sup>2+</sup>-dependent, phospholipid-binding protein. *Biochemistry* 39: 16163-16175.
- Tomsig, J.L. and Creutz, C.E. 2002. Copines: a ubiquitous family of Ca<sup>2+</sup>-dependent phospholipid-binding proteins. *Cell. Mol. Life Sci.* 59: 1467-1477.
- Church, D.L. and Lambie, E.J. 2003. The promotion of gonadal cell divisions by the *Caenorhabditis elegans* TRPM cation channel GON-2 is antagonized by GEM-4 copine. *Genetics* 165: 563-574.
- Tomsig, J.L., et al. 2003. Identification of targets for calcium signaling through the copine family of proteins. Characterization of a coiled-coil copine-binding motif. *J. Biol. Chem.* 278: 10048-10054.
- Cowland, J.B., et al. 2003. Tissue expression of copines and isolation of copines I and III from the cytosol of human neutrophils. *J. Leukoc. Biol.* 74: 379-388.

## CHROMOSOMAL LOCATION

Genetic locus: CPNE9 (human) mapping to 3p25.3; Cpne9 (mouse) mapping to 6 E3.

## SOURCE

copine 9 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-23 at the N-terminus of copine 9 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> 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-376604 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

copine 9 (D-6) is recommended for detection of copine 9 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 copine 9 siRNA (h): sc-78407, copine 9 siRNA (m): sc-142510, copine 9 shRNA Plasmid (h): sc-78407-SH, copine 9 shRNA Plasmid (m): sc-142510-SH, copine 9 shRNA (h) Lentiviral Particles: sc-78407-V and copine 9 shRNA (m) Lentiviral Particles: sc-142510-V.

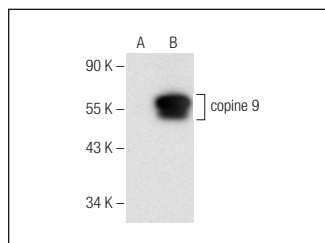
Molecular Weight of copine 9: 56 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, K-562 whole cell lysate: sc-2203 or copine 9 (h): 293T Lysate: sc-112579.

## 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



copine 9 (D-6): sc-376604. Western blot analysis of copine 9 expression in non-transfected: sc-117752 (A) and human copine 9 transfected: sc-112579 (B) 293T whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.