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# copine 9 (F-3): sc-376054

## 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 WWFA (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.
- Thomas, G., et al. 2008. Multiple loci identified in a genome-wide association study of prostate cancer. *Nat. Genet.* 40: 310-315.

## CHROMOSOMAL LOCATION

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

## SOURCE

copine 9 (F-3) 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.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</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-376054 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

copine 9 (F-3) 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.

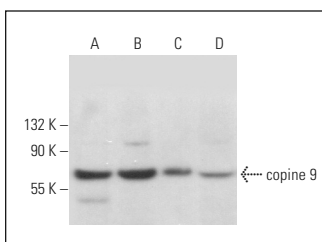
Molecular Weight of copine 9: 56 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, Ramos cell lysate: sc-2216 or copine 9 (h): 293T Lysate: sc-112579.

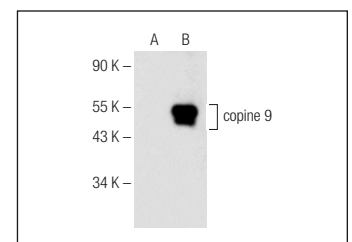
## RECOMMENDED SUPPORT REAGENTS

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 (F-3): sc-376054. Western blot analysis of copine 9 expression in Jurkat (A), Raji (B), Ramos (C) and NAMALWA (D) whole cell lysates.



copine 9 (F-3): sc-376054. 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.

## RESEARCH USE

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