copine 9 (Y-12): sc-99857



The Power to Question

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., Tomsig, J.L., Snyder, S.L., Gautier, M.C., Skouri, F., Beisson, J. and Cohen, J. 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., Caudell, J.J., Tang, C.H., Yu, T.K., Frederick, M.J. and Grimm, E.A. 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 Ca²⁺-dependent, phospholipid-binding protein. Biochemistry 39: 16163-16175.
- Tomsig, J.L. and Creutz, C.E. 2002. Copines: a ubiquitous family of Ca²⁺-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., Snyder, S.L. and Creutz, C.E. 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., Carter, D., Bjerregaard, M.D., Johnsen, A.H., Borregaard, N. and Lollike, K. 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 (Y-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of copine 9 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-99857 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

copine 9 (Y-12) is recommended for detection of copine 9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with other copine family members.

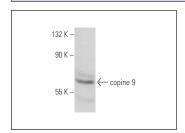
copine 9 (Y-12) is also recommended for detection of copine 9 in additional species, including equine, canine, bovine and porcine.

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.

DATA



copine 9 (Y-12): sc-99857. Western blot analysis of copine 9 expression in BJAB whole cell lysate.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **copine 9 (B-6): sc-376523** or **copine 9 (D-6): sc-376604**, our highly recommended monoclonal alternatives to copine 9 (Y-12).