# copine 6 (E-15): sc-164087



The Power to Question

#### **BACKGROUND**

Copine 6, also known as CPNE6 or Neuronal-copine, is a 557 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 6 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 6 functions in membrane trafficking and is capable of binding phospholipids in a calcium-dependent manner. Copine 6 may also play a role in synaptic plasticity.

## **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.
- Nakayama, T., Yaoi, T., Yasui, M. and Kuwajima, G. 1998. N-copine: a novel two C2-domain-containing protein with neuronal activity-regulated expression. FEBS Lett. 428: 80-84.
- 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.
- 4. 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., 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.
- 8. Thomas, G., Jacobs, K.B., Yeager, M., Kraft, P., Wacholder, S., Orr, N., Yu, K., Chatterjee, N., Welch, R., Hutchinson, A., Crenshaw, A., Cancel-Tassin, G., Staats, B.J., Wang, Z., Gonzalez-Bosquet, J., Fang, J., et al. 2008. Multiple loci identified in a genome-wide association study of prostate cancer. Nat. Genet. 40: 310-315.

## **CHROMOSOMAL LOCATION**

Genetic locus: CPNE6 (human) mapping to 14q11.2; Cpne6 (mouse) mapping to 14 C3.

# SOURCE

copine 6 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of copine 6 of human origin.

#### **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164087 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

copine 6 (E-15) is recommended for detection of copine 6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

copine 6 (E-15) is also recommended for detection of copine 6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for copine 6 siRNA (h): sc-92399, copine 6 siRNA (m): sc-142507, copine 6 shRNA Plasmid (h): sc-92399-SH, copine 6 shRNA Plasmid (m): sc-142507-SH, copine 6 shRNA (h) Lentiviral Particles: sc-92399-V and copine 6 shRNA (m) Lentiviral Particles: sc-142507-V.

Molecular Weight of copine 6: 62 kDa.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **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 or our catalog for detailed protocols and support products.



Try **copine 6 (42): sc-136357**, our highly recommended monoclonal alternative to copine 6 (E-15).