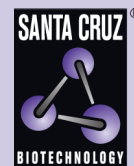


# copine 6 (42): sc-136357



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., 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.
- Nakayama, T., et al. 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.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

copine 6 (42) is a mouse monoclonal antibody raised against amino acids 4-125 of copine 6 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

copine 6 (42) is available conjugated to agarose (sc-136357 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136357 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136357 PE), fluorescein (sc-136357 FITC), Alexa Fluor® 488 (sc-136357 AF488), Alexa Fluor® 594 (sc-136357 AF594) or Alexa Fluor® 647 (sc-136357 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136357 AF680) or Alexa Fluor® 790 (sc-136357 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

copine 6 (42) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

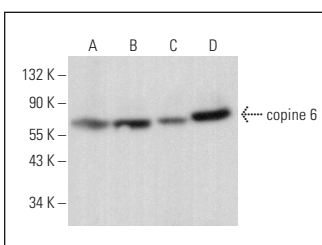
Molecular Weight of copine 6: 62 kDa.

Positive Controls: rat hippocampus tissue extract, rat brain extract: sc-2392 or mouse brain extract: sc-2253.

## 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 6 (42): sc-136357. Western blot analysis of copine 6 expression in rat brain (A), mouse brain (B), human cerebral cortex (C) and rat hippocampus (D) tissue extracts. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

## SELECT PRODUCT CITATIONS

- Reinhard, J.R., et al. 2016. The calcium sensor copine-6 regulates spine structural plasticity and learning and memory. *Nat. Commun.* 7: 11613.
- Goel, M., et al. 2019. Differential expression and subcellular localization of copines in mouse retina. *J. Comp. Neurol.* 527: 2245-2262.

## STORAGE

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