

copine 4 siRNA (m): sc-142505

BACKGROUND

Copine 4, also known as CPNE4, CPN4 or COPN4, 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 4 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 4 functions in membrane trafficking and is capable of binding phospholipids in a calcium-dependent manner. There are two isoforms of copine 4 that exist as a result of alternative splicing events.

REFERENCES

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2. Caudell, E.G., et al. 2000. Characterization of human copine III as a phosphoprotein with associated kinase activity. *Biochemistry* 39: 13034-13043.
3. Tomsig, J.L. and Creutz, C.E. 2000. Biochemical characterization of copine: a ubiquitous Ca^{2+} -dependent, phospholipid-binding protein. *Biochemistry* 39: 16163-16175.
4. Tomsig, J.L. and Creutz, C.E. 2002. Copines: a ubiquitous family of Ca^{2+} -dependent phospholipid-binding proteins. *Cell. Mol. Life Sci.* 59: 1467-1477.
5. 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.
6. 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.
7. 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.
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CHROMOSOMAL LOCATION

Genetic locus: Cpne4 (mouse) mapping to 9 F1.

RESEARCH USE

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

PROTOCOLS

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

PRODUCT

copine 4 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see copine 4 shRNA Plasmid (m): sc-142505-SH and copine 4 shRNA (m) Lentiviral Particles: sc-142505-V as alternate gene silencing products.

For independent verification of copine 4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-142505A, sc-142505B and sc-142505C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

copine 4 siRNA (m) is recommended for the inhibition of copine 4 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor copine 4 gene expression knockdown using RT-PCR Primer: copine 4 (m)-PR: sc-142505-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.