

# copine 7 siRNA (m): sc-142508

## BACKGROUND

Copine 7, also known as CPNE7, is a 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 7 contains two C2 domains and one VWFA (von Willebrand factor A) domain, which is also referred to as the A domain or the core domain. Existing as two alternatively spliced isoforms, copine 7 is thought to function in membrane trafficking and is encoded by a gene that maps to human chromosome 16q24.3.

## REFERENCES

1. 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.
2. Savino, M., et al. 1999. Characterization of copine VII, a new member of the copine family, and its exclusion as a candidate in sporadic breast cancers with loss of heterozygosity at 16q24.3. *Genomics* 61: 219-226.
3. Tomsig, J.L., et al. 2000. Biochemical characterization of copine: a ubiquitous  $Ca^{2+}$ -dependent, phospholipid-binding protein. *Biochemistry* 39: 16163-16175.
4. Jambunathan, N., et al. 2001. A humidity-sensitive *Arabidopsis* copine mutant exhibits precocious cell death and increased disease resistance. *Plant Cell* 13: 2225-2240.
5. 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.
6. 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.
7. Damer, C.K., et al. 2005. Copine A, a calcium-dependent membrane-binding protein, transiently localizes to the plasma membrane and intracellular vacuoles in *Dictyostelium*. *BMC Cell Biol.* 6: 46.

## CHROMOSOMAL LOCATION

Genetic locus: Cpne7 (mouse) mapping to 8 E1.

## PRODUCT

copine 7 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see copine 7 shRNA Plasmid (m): sc-142508-SH and copine 7 shRNA (m) Lentiviral Particles: sc-142508-V as alternate gene silencing products.

For independent verification of copine 7 (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-142508A, sc-142508B and sc-142508C.

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

## APPLICATIONS

copine 7 siRNA (m) is recommended for the inhibition of copine 7 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  $\mu$ M in 66  $\mu$ 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 7 gene expression knockdown using RT-PCR Primer: copine 7 (m)-PR: sc-142508-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.