SANTA CRUZ BIOTECHNOLOGY, INC.

copine 8 siRNA (m): sc-142509

BACKGROUND

Copine 8, also known as CPNE8, 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 8 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. As is characteristic of the copine family, copine 8 functions in membrane trafficking and is capable of binding phospholipids in a calcium-dependent manner. Copine 8 is subject to post-translational phosphorylation, most likely by either ATR or Atm, and is encoded by a gene that maps to human chromosome 12q12.

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. Nakayama, T., et al. 1998. N-copine: a novel two C2-domain-containing protein with neuronal activity-regulated expression. FEBS Lett. 428: 80-84.
3. Tomsig, J.L., et al. 2000. Biochemical characterization of copine: a ubiquitous Ca^{2+}-dependent, phospholipid-binding protein. Biochemistry 39: 16163-16175.
4. Tomsig, J.L., et al. 2002. Copines: a ubiquitous family of Ca^{2+}-dependent phospholipid-binding proteins. Cell. Mol. Life Sci. 59: 1467-1477.
5. Church, D.L., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: Cpne8 (mouse) mapping to 15 E3.

PRODUCT

copine 8 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see copine 8 shRNA Plasmid (m): sc-142509-SH and copine 8 shRNA (m) Lentiviral Particles: sc-142509-V as alternate gene silencing products.

PROTOCOLS

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

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

copine 8 siRNA (m) is recommended for the inhibition of copine 8 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 µM in 66 µl. 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 8 gene expression knockdown using RT-PCR Primer: copine 8 (m)-PR: sc-142509-PR (20 µl). 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.