SANTA CRUZ BIOTECHNOLOGY, INC.

copine 8 siRNA (h): sc-95662

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

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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 (human) mapping to 12q12.

PRODUCT

copine 8 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see copine 8 shRNA Plasmid (h): sc-95662-SH and copine 8 shRNA (h) Lentiviral Particles: sc-95662-V as alternate gene silencing products.

For independent verification of copine 8 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95662A, sc-95662B and sc-95662C.

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 (h) is recommended for the inhibition of copine 8 expression in human 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 (h)-PR: sc-95662-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.

PROTOCOLS

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