SANTA CRUZ BIOTECHNOLOGY, INC.

# COMMD8 siRNA (h): sc-89035

## BACKGROUND

COMMD family members are a group of evolutionary conserved proteins that share a common COMM domain at the extreme C-terminus, which provides an interface for protein-protein interactions. Of the ten family members, the role of COMMD1, also known as MURR1, is best characterized, functioning to inhibit TNF-induced NFκB p50 and to facilitate biliary copper excretion within hepatocytes. Most, if not all, COMMD proteins have been found to play a role in the regulation of NFκB and, despite their similarities, seem to function in unique and non-redundant pathways. COMMD proteins may also play a role in the function of epithelial sodium channels, cell proliferation, copper homeostasis and in the regulation of the ubiquitin pathway. As a member of the COMMD family, COMM domain-containing protein 8 is a 183 amino acid protein that is widely expressed with highest expression in thyroid.

## REFERENCES


1. Burstein, E., et al. 2005. COMMD proteins, a novel family of structural and functional homologs of MURR1. J. Biol. Chem. 280: 22222-22232.
2. de Bie, P., et al. 2006. Characterization of COMMD protein-protein interactions in NFκB signalling. Biochem. J. 398: 63-71.
3. Maine, G.N. and Burstein, E. 2007. COMMD proteins and the control of the NFκB pathway. Cell Cycle 6: 672-676.
4. Maine, G.N. and Burstein, E. 2007. COMMD proteins: COMMing to the scene. Cell. Mol. Life Sci. 64: 1997-2005.
5. van de Sluis, B., et al. 2007. Increased activity of hypoxia-inducible factor 1 is associated with early embryonic lethality in Commd1 null mice. Mol. Cell. Biol. 27: 4142-4156.
6. Maine, G.N., et al. 2009. COMMD1 expression is controlled by critical residues that determine XIAP binding. Biochem. J. 417: 601-609.
7. Burkhead, J.L., et al. 2009. COMMD1 forms oligomeric complexes targeted to the endocytic membranes via specific interactions with phosphatidylinositol 4,5-bisphosphate. J. Biol. Chem. 284: 696-707.


## CHROMOSOMAL LOCATION

Genetic locus: COMMD8 (human) mapping to 4p12.

## PRODUCT

COMMD8 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 COMMD8 shRNA Plasmid (h): sc-89035-SH and COMMD8 shRNA (h) Lentiviral Particles: sc-89035-V as alternate gene silencing products.

For independent verification of COMMD8 (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-89035A, sc-89035B and sc-89035C.

## 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

COMMD8 siRNA (h) is recommended for the inhibition of COMMD8 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.

## GENE EXPRESSION MONITORING

COMMD8 (F-1): sc-373869 is recommended as a control antibody for monitoring of COMMD8 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor COMMD8 gene expression knockdown using RT-PCR Primer: COMMD8 (h)-PR: sc-89035-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.