

COMMD6 siRNA (h): sc-72966

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 NF κ B 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 NF κ B 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, COMMD6 (COMM domain-containing protein 6) is an 85 amino acid protein that interacts directly with COMMD1. With expression in lung, skeletal muscle, liver, kidney, pancreas, small intestine, placenta, brain and heart, COMMD6 is localized to the cytoplasm and the nucleus.

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 NF κ B signalling. *Biochem. J.* 398: 63-71.
3. Maine, G.N., et al. 2007. COMMD proteins and the control of the NF κ B pathway. *Cell Cycle* 6: 672-676.
4. Maine, G.N., et al. 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. 2008. COMMD1 expression is controlled by critical residues that determine XIAP binding. *Biochem. J.* 417: 601-609.
7. Burkhead, J.L., et al. 2008. COMMD1 forms oligomeric complexes targeted to the endocytic membranes via specific interactions with PtdIns(4,5)p2. *J. Biol. Chem.* 284: 696-707.

CHROMOSOMAL LOCATION

Genetic locus: COMMD6 (human) mapping to 13q22.2.

PRODUCT

COMMD6 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see COMMD6 shRNA Plasmid (h): sc-72966-SH and COMMD6 shRNA (h) Lentiviral Particles: sc-72966-V as alternate gene silencing products.

For independent verification of COMMD6 (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-72966A, sc-72966B and sc-72966C.

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

COMMD6 siRNA (h) is recommended for the inhibition of COMMD6 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 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 COMMD6 gene expression knockdown using RT-PCR Primer: COMMD6 (h)-PR: sc-72966-PR (20 μ 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 for detailed protocols and support products.