SANTA CRUZ BIOTECHNOLOGY, INC.

COMMD5 siRNA (h): sc-77657

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. Most, if not all, COMMD proteins have been found to play a role in the regulation 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, COMMD5 (COMM domain-containing protein 5), also known as HCaRG (hypertension-related calcium-regulated gene protein), is a 224 amino acid protein that is negatively regulated by extracellular calcium concentrations. Due to lower proliferation rates observed in COMMD5-transfected HEK293 cells, it is suggested that COMMD5 may play a regulatory role in cell proliferation. COMMD5 is localized to the nucleus and is expressed in stomach, liver, kidney, heart, adrenal gland and jejunum, with higher levels of mRNA expression found in hypertensive animals.

REFERENCES

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3. Devlin, A.M., et al. 2003. HCaRG is a novel regulator of renal epithelial cell growth and differentiation causing G_2M arrest. Am. J. Physiol. Renal Physiol. 284: F753-F762.
4. de Bie, P., et al. 2006. Characterization of COMMD protein-protein interactions in NFκB signalling. Biochem. J. 398: 63-71.
5. Maine, G.N., et al. 2007. COMMD proteins and the control of the NFκB pathway. Cell Cycle 6: 672-676.
6. Maine, G.N., et al. 2007. COMMD proteins: COMMing to the scene. Cell. Mol. Life Sci. 64: 1997-2005.
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CHROMOSOMAL LOCATION

Genetic locus: COMMD5 (human) mapping to 8q24.3.

PRODUCT

COMMD5 siRNA (h) is a pool of 2 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 COMMD5 shRNA Plasmid (h): sc-77657-SH and COMMD5 shRNA (h) Lentiviral Particles: sc-77657-V as alternate gene silencing products.

For independent verification of COMMD5 (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-77657A and sc-77657B.

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

COMMD5 siRNA (h) is recommended for the inhibition of COMMD5 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 COMMD5 gene expression knockdown using RT-PCR Primer: COMMD5 (h)-PR: sc-77657-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.