SANTA CRUZ BIOTECHNOLOGY, INC.

AMMECR1 siRNA (h): sc-91137

BACKGROUND

AMMECR1 (Alport syndrome, mental retardation, midface hypoplasia and elliptocytosis chromosomal region gene 1), also known as AMME syndrome candidate gene 1 protein, is a 333 amino acid protein that contains one AMMECR1 domain. Encoded by a gene that maps to human chromosome Xq22.3, AMMECR1 is widely conserved, from *Caenorhabditis elegans* and yeast to microorganisms, with exon 2 encoding an evolutionarily conserved, six amino acid domain. Containing a glycine-rich N terminus, the AMMECR1 protein exhibits putative nuclear localization and a substantial level of instability, suggesting it plays a role in regulation. Additionally, numerous potential phosphorylation sites imply that AMMECR1 is subject to stringent regulation. AMMECR1 defects are linked to Alport syndrome, an X-linked contiguous gene deletion syndrome characterized by glomerulonephritis, deafness, mental retardation, midface hypoplasia and elliptocytosis.

REFERENCES

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7. Meloni, I., et al. 2002. Alport syndrome and mental retardation: clinical and genetic dissection of the contiguous gene deletion syndrome in Xq22.3 (ATS-MR). J. Med. Genet. 39: 359-365.
8. Tajika, Y., et al. 2005. Crystal structure of PH0010 from *Pyrococcus horikoshii,* which is highly homologous to human AMMECR 1C-terminal region. Proteins 58: 501-503.
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CHROMOSOMAL LOCATION

Genetic locus: AMMECR1 (human) mapping to Xq23.

PROTOCOLS

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

PRODUCT

AMMECR1 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 AMMECR1 shRNA Plasmid (h): sc-91137-SH and AMMECR1 shRNA (h) Lentiviral Particles: sc-91137-V as alternate gene silencing products.

For independent verification of AMMECR1 (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-91137A, sc-91137B and sc-91137C.

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

AMMECR1 siRNA (h) is recommended for the inhibition of AMMECR1 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 AMMECR1 gene expression knockdown using RT-PCR Primer: AMMECR1 (h)-PR: sc-91137-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.