SANTA CRUZ BIOTECHNOLOGY, INC.

ANGEL2 siRNA (m): sc-141060

BACKGROUND

ANGEL2 (protein angel homolog 2) is a 544 amino acid protein that belongs to the CCR4/nocturin family and exists as two alternatively spliced isoforms. The CCR4 family of proteins are 3'-5'-deadenylases that function in the first step of the degradation of poly(A) mRNA. The CCR4 family most likely displays both RNA and ssDNA substrate preferences, thereby implicating a potential role in many regulatory processes. The ANGEL2 gene maps to human chromosome 1 (1q32.3), which is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. Chromosome 1 contains about 3,000 genes, and considering the great number of genes there are also a large number of diseases associated with it. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons disease, Gaucher disease and Usher syndrome are also associated with chromosome 1.

REFERENCES

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3. Ekelund, J., et al. 2001. Chromosome 1 loci in Finnish schizophrenia families. Hum. Mol. Genet. 10: 1611-1617.
4. Chen, J., et al. 2002. CCR4, a 3'-5' poly(A) RNA and ssDNA exonuclease, is the catalytic component of the cytoplasmic deadenylase. EMBO J. 21: 1414-1426.
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6. Nimmo, G., et al. 2010. Rhizomelic chrondrodysplasia punctata type 2 resulting from paternal isodisomy of chromosome 1. Am. J. Med. Genet. A 152A: 1812-1817.
7. Najfeld, V., et al. 2010. Jumping translocations of the long arms of chromosome 1 in myeloid malignancies is associated with a high risk of transformation to acute myeloid leukaemia. Br. J. Haematol. 151: 288-291.
8. SWISS-PROT/TrEMBL (Q5VTE6). World Wide Web URL: http://www.uniprot.org/uniprot/Q5VTE6

CHROMOSOMAL LOCATION

Genetic locus: Angel2 (mouse) mapping to 1 H6.

PRODUCT

ANGEL2 siRNA (m) 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 ANGEL2 shRNA Plasmid (m): sc-141060-SH and ANGEL2 shRNA (m) Lentiviral Particles: sc-141060-V as alternate gene silencing products.

For independent verification of ANGEL2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-141060A, sc-141060B and sc-141060C.

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

ANGEL2 siRNA (m) is recommended for the inhibition of ANGEL2 expression in mouse 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 ANGEL2 gene expression knockdown using RT-PCR Primer: ANGEL2 (m)-PR: sc-141060-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.