SANTA CRUZ BIOTECHNOLOGY, INC.

AMDHD2 siRNA (h): sc-93453

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The Power to Question

BACKGROUND

AMDHD2 (amidohydrolase domain containing 2), also known as putative N-acetylglucosamine-6-phosphate deacetylase or GlcNAc 6-P deacetylase, is a 409 amino acid protein belonging to the NAGA family. AMDHD2 participates in N-acetylglucosamine-6-phosphate deacetylase and in hydrolase activities, acting on carbon-nitrogen bonds, but not peptide bonds. AMDHD2 likely participates in a direct regulatory relationship with microphthalmia-associated transcription factor (MITF), which is necessary for melanocyte development, and is a mediated upregulation target of MITF. Existing as three alternatively spliced isoforms, AMDHD2 is encoded by a gene that maps to human chromosome 16p13.3. Chromosome 16 encodes over 900 genes, making up nearly 3% of human cellular DNA. The rare disorder Rubinstein-Taybi syndrome, characterized by mental retardation and predisposition to tumor growth and white blood cell neoplasiasis, is associated with chromosome 16. Crohn's disease, systemic lupus erythematosis and a number of autoimmune disorders are also associated with chromosome 16.

REFERENCES

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3. Carneiro, L.A., et al. 2007. Nod-like receptors in innate immunity and inflammatory diseases. Ann. Med. 39: 581-593.
4. Gervasini, C., et al. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germ-line breakpoints. Genomics 90: 567-573.
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6. Tattoli, I., et al. 2007. The nodosome: NOD1 and NOD2 control bacterial infections and inflammation. Semin. Immunopathol. 29: 289-301.
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CHROMOSOMAL LOCATION

Genetic locus: AMDHD2 (human) mapping to 16p13.3.

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.

PRODUCT

AMDHD2 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 AMDHD2 shRNA Plasmid (h): sc-93453-SH and AMDHD2 shRNA (h) Lentiviral Particles: sc-93453-V as alternate gene silencing products.

For independent verification of AMDHD2 (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-93453A, sc-93453B and sc-93453C.

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

AMDHD2 siRNA (h) is recommended for the inhibition of AMDHD2 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 AMDHD2 gene expression knockdown using RT-PCR Primer: AMDHD2 (h)-PR: sc-93453-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.