SANTA CRUZ BIOTECHNOLOGY, INC.

ALKBH6 siRNA (m): sc-141023

BACKGROUND

ALKBH6 (alkB, alkylation repair homolog 6), also known as probable α-ketoglutarate-dependent dioxygenase ABH6 or alkylated DNA repair protein alkB homolog 6, is a 238 amino acid protein belonging to the AlkB family. Located on human chromosome 19q13.12, the ALKBH6 gene is one of eight known human ALKB genes, which include ALKB, ALKBH2, ALKBH3, ALKBH4, ALKBH5, ALKBH7 and ALKBH8. Existing as three alternatively spliced isoforms, ALKBH6 is widely expressed, with high expression in testis and pancreas, and localizes to cytoplasm and nucleus. ALKBH6 contains an Fe2OG dioxygenase domain, suggesting its function as a dioxygenase, which requires molecular oxygen, α-ketoglutarate and iron. ALKBH6 binds one Fe^{2+} ion per subunit and participates in oxidoreductase activities.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Alkbh6 (mouse) mapping to 7 B1.

PROTOCOLS

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

PRODUCT

ALKBH6 siRNA (m) 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 ALKBH6 shRNA Plasmid (m): sc-141023-SH and ALKBH6 shRNA (m) Lentiviral Particles: sc-141023-V as alternate gene silencing products.

For independent verification of ALKBH6 (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-141023A and sc-141023B.

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

ALKBH6 siRNA (m) is recommended for the inhibition of ALKBH6 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 ALKBH6 gene expression knockdown using RT-PCR Primer: ALKBH6 (m)-PR: sc-141023-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.