SANTA CRUZ BIOTECHNOLOGY, INC.

HELZ siRNA (h): sc-94245

BACKGROUND

Helicases comprise a class of enzymes that function as motor proteins which move along nucleic acid phosphodiester bonds, effectively separating two annealed nucleic acid strands. RNA helicases alter the conformation of RNA, specifically by unwinding double-stranded RNA regions to yield single RNA strands, a process which changes the biological activity of the RNA molecule. HELZ (helicase with zinc finger), also known as DHRC or HUMORF5, is a 1,942 amino acid nuclear protein that contains one C3H1-type zinc finger and belongs to the RNA helicase superfamily. Expressed ubiquitously during embryonic development, HELZ is thought to function as an RNA helicase that modifies RNA structure and plays a role in the development of multiple organs and tissues within the developing embryo.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: HELZ (human) mapping to 17q24.2.

PRODUCT

HELZ 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 HELZ shRNA Plasmid (h): sc-94245-SH and HELZ shRNA (h) Lentiviral Particles: sc-94245-V as alternate gene silencing products.

For independent verification of HELZ (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-94245A, sc-94245B and sc-94245C.

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

HELZ siRNA (h) is recommended for the inhibition of HELZ 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.

GENE EXPRESSION MONITORING

HELZ (FA-52): sc-130438 is recommended as a control antibody for monitoring of HELZ gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HELZ gene expression knockdown using RT-PCR Primer: HELZ (h)-PR: sc-94245-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.