14-3-3 ζ siRNA (h): sc-29583

BACKGROUND

14-3-3 proteins regulate many cellular processes relevant to cancer biology, notably apoptosis, mitogenic signaling and cell-cycle checkpoints. Seven isoforms comprise this family of signaling intermediates, denoted 14-3-3 β, γ, ε, ζ, η and α. 14-3-3 proteins form dimers that present two binding sites for ligand proteins, thereby bringing together two proteins that may not otherwise associate. These ligands largely share a 14-3-3 consensus binding motif and exhibit serine/threonine phosphorylation. 14-3-3 proteins function in broad regulation of these ligand proteins, by cytoplasmic sequestration, occupation of interaction domains and import/export sequences, prevention of degradation, activation/repression of enzymatic activity and facilitation of protein modification, and thus loss of expression contributes to a vast array of pathogenic cellular activities.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: YWHAZ (human) mapping to 8q22.3

PRODUCT

14-3-3 ζ siRNA (h) is a pool of 4 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 14-3-3 ζ shRNA Plasmid (1 gene delivered by hepatocellular carcinoma-

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

14-3-3 ζ siRNA (h) is recommended for the inhibition of 14-3-3 ζ 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-36888 (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 and sc-44237.

GENE EXPRESSION MONITORING

14-3-3 ζ (183): sc-293415 is recommended as a control antibody for monitoring of 14-3-3 ζ 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor 14-3-3 ζ gene expression knockdown using RT-PCR Primer: 14-3-3 ζ (h)-PR: sc-29583-PR (20 µl, 422 bp). Annealing temperature for the primers should be 55-60°C and the extension temperature should be 68-72°C.

DATA

![Image]

14-3-3 ζ siRNA (h): sc-29583. Western blot analysis of 14-3-3 ζ expression in non-transfected control (A) and 14-3-3 ζ siRNA transfected (B) HeLa cells. Blot probed with 14-3-3 ζ (C-19) sc-1019. Actin (I-19): sc-1616 used as specificity and loading control.

SELECT PRODUCT CITATIONS


RESEARCH USE

For research use only, not for use in diagnostic procedures.