



S-100Z siRNA (h): sc-91704

BACKGROUND

The S-100 protein family consists of a group of calcium-binding proteins that are exclusively expressed in vertebrates and exhibit cell and tissue-specific expression. The expression levels of its members differ in various pathological conditions. The extracellular functions of the S-100 family may include the ability to enhance neurite outgrowth, involvement in inflammation and motility of tumor cells. S-100Z (S100 calcium-binding protein Z) is a 99 amino acid protein that shares 57% and 52% sequence identity with S-100A1 and S-100P, respectively. A dimeric, predominantly α -helical protein, S-100Z contains two EF-hand domains capable of binding calcium ions. Binding of calcium results in conformational changes and exposure of hydrophobic surfaces on the protein. S-100Z interacts with S-100P, and demonstrates highest level of expression in spleen and leukocytes. The S-100Z gene is conserved in chimpanzee, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 5q13.3.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: S100Z (human) mapping to 5q13.3.

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

S-100Z 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see S-100Z shRNA Plasmid (h): sc-91704-SH and S-100Z shRNA (h) Lentiviral Particles: sc-91704-V as alternate gene silencing products.

For independent verification of S-100Z (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-91704A, sc-91704B and sc-91704C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

S-100Z siRNA (h) is recommended for the inhibition of S-100Z 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 μ M in 66 μ l. 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 S-100Z gene expression knockdown using RT-PCR Primer: S-100Z (h)-PR: sc-91704-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.