

S-100A3 siRNA (m): sc-153188

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-100A3 (S100 calcium binding protein A3), also known as S100E, is a 101 amino acid cysteine-rich protein that belongs to the S-100 family of proteins. Expressed specifically at the inner endocuticle of hair fibers, S-100A3 contains two EF-hand domains and exists as a multimer. S-100A3 binds calcium with low affinity and zinc with high affinity and is believed to play a role in the calcium-dependent differentiation of cuticle cells and in the formation of hair shafts.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: S100a3 (mouse) mapping to 3 F1.

PRODUCT

S-100A3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see S-100A3 shRNA Plasmid (m): sc-153188-SH and S-100A3 shRNA (m) Lentiviral Particles: sc-153188-V as alternate gene silencing products.

For independent verification of S-100A3 (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-153188A and sc-153188B.

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-100A3 siRNA (m) is recommended for the inhibition of S-100A3 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 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-100A3 gene expression knockdown using RT-PCR Primer: S-100A3 (m)-PR: sc-153188-PR (20 μ l). 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.