

ASCL2 siRNA (h): sc-96998

BACKGROUND

Members of the myogenic determination family are basic helix-loop-helix (bHLH) proteins that can be separated into two classes, both of which work together to activate DNA transcription. Class A proteins include the ubiquitously expressed E-box binding factors, namely E2A, ITF-2 and HEB, while class B proteins, such as MyoD, myogenin and Neuro D (BETA2), are transiently expressed and exhibit a much more limited tissue distribution. Working in opposition to these positively acting factors are a specialized group of basic helix-loop-helix (bHLH) transcription factors that function as dominant negative regulators and are involved in cell lineage determination and differentiation. ASCL2 (achaete-scute complex homolog 2), also known as ASH2, HASH2 or MASH2, is a 193 amino acid protein that localizes to the nucleus and contains one bHLH domain. Expressed in developing placental tissue, ASCL2 binds to DNA and functions as a transcriptional regulator that is involved in the maturation of neuronal precursors in the peripheral and central nervous systems.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ASCL2 (human) mapping to 11p15.5.

PROTOCOLS

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

PRODUCT

ASCL2 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 ASCL2 shRNA Plasmid (h): sc-96998-SH and ASCL2 shRNA (h) Lentiviral Particles: sc-96998-V as alternate gene silencing products.

For independent verification of ASCL2 (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-96998A, sc-96998B and sc-96998C.

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

ASCL2 siRNA (h) is recommended for the inhibition of ASCL2 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 ASCL2 gene expression knockdown using RT-PCR Primer: ASCL2 (h)-PR: sc-96998-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.