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SANTA CRUZ BIOTECHNOLOGY, INC.

MIXL1 siRNA (m): sc-149452

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and in the control of gene expression. MIXL1 (Mix1 homeobox-like 1), also known as MIXL, is a 232 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. Expressed in lymph tissues, MIXL1 functions as a transcription factor that plays an essential role in axial mesendoderm morphogenesis and endoderm formation and is also required for cellular differentiation during blood development. Additionally, MIXL1 is involved in maturation of heart and gut tissue during embryogenesis and may also act as a negative regulator of brachyury expression. Overexpression of MIXL1 is associated with non-Hodgkin and Hodgkin lymphomas, suggesting a role in carcinogenesis.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Mixl1 (mouse) mapping to 1 H4.

PRODUCT

MIXL1 siRNA (m) is a target-specific 19-25 nt siRNA 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 MIXL1 shRNA Plasmid (m): sc-149452-SH and MIXL1 shRNA (m) Lentiviral Particles: sc-149452-V as alternate gene silencing products.

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

MIXL1 siRNA (m) is recommended for the inhibition of MIXL1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor MIXL1 gene expression knockdown using RT-PCR Primer: MIXL1 (m)-PR: sc-149452-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.