SANTA CRUZ BIOTECHNOLOGY, INC.

LAF4 siRNA (m): sc-146636

BACKGROUND

LAF4 (lymphoid nuclear protein related to AF4), also known as AFF3 (AF4/FMR2 family, member 3), is a 1,226 amino acid nuclear protein that is preferentially expressed in lymphoid tissues and is thought to function as a transcriptional activator. Through its ability to interact with and bind to double-stranded DNA, LAF4 may be involved in lymphoid development and oncogenesis. The gene encoding LAF4 maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Ma, C. and Staudt, L.M. 1996. LAF4 encodes a lymphoid nuclear protein with transactivation potential that is homologous to AF-4, the gene fused to MLL in t(4;11) leukemias. Blood 87: 734-745.
2. Liao, X., et al. 1996. LAF4 maps to mouse chromosome 1 and human chromosome 2q11.2-q12. Mamm. Genome 7: 467-468.
3. von Bergh, A.R., et al. 2002. LAF4, an AF4-related gene, is fused to MLL in infant acute lymphoblastic leukemia. Genes Chromosomes Cancer 35: 92-96.
4. Bruch, J., et al. 2003. Occurrence of an MLL/LAF4 fusion gene caused by the insertion ins(11;2)(q23;q11.2q11.2) in an infant with acute lymphoblastic leukemia. Genes Chromosomes Cancer 37: 106-109.
5. Hiwatari, M., et al. 2003. Fusion of an AF4-related gene, LAF4, to MLL in childhood acute lymphoblastic leukemia with t(2;11)(q11;q23). Oncogene 22: 2851-2855.

CHROMOSOMAL LOCATION

Genetic locus: Aff3 (mouse) mapping to 1 B.

PRODUCT

LAF4 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 LAF4 shRNA Plasmid (m): sc-146636-SH and LAF4 shRNA (m) Lentiviral Particles: sc-146636-V as alternate gene silencing products.

For independent verification of LAF4 (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-146636A, sc-146636B and sc-146636C.

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.

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

LAF4 siRNA (m) is recommended for the inhibition of LAF4 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 LAF4 gene expression knockdown using RT-PCR Primer: LAF4 (m)-PR: sc-146636-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.