SANTA CRUZ BIOTECHNOLOGY, INC.

FEM1C siRNA (h): sc-91928

BACKGROUND

The FEM proteins are components of a novel signal transduction pathway and are required for male sexual development in the nematode *C. elegans*. FEM1C (fem-1 homolog c *(C. elegans)),* also known as FEM1-γ, is a 617 amino acid protein that is thought to exist as a component of the E3 ubiquitin-protein ligase complex. Localized to the cytoplasm, FEM1C is widely expressed but is found at highest levels in testis, skeletal muscle, cardiac tissue and kidney. FEM1C belongs to the FEM-1 family and contains nine ANK repeats and two TPR repeats. The gene encoding FEM1C maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm or of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Krakow, D., et al. 2001. Identification of human FEM1A, the ortholog of a *C. elegans* sex-differentiation gene. Gene 279: 213-219.
2. Ventura-Holman, T., et al. 2003. The Fem1c genes: conserved members of the Fem1 gene family in vertebrates. Gene 314: 133-139.
3. Sjöblom, T., et al. 2006. The consensus coding sequences of human breast and colorectal cancers. Science 314: 268-274.
4. Goodarzi, M.O., et al. 2008. FEM1A and FEM1B: novel candidate genes for polycystic ovary syndrome. Hum. Reprod. 23: 2842-2849.
5. Vera-Carbonell, A., et al. 2009. Characterization of a *de novo* complex chromosomal rearrangement in a patient with cri-du-chat and trisomy 5p syndromes. Am. J. Med. Genet. A 149A: 2513-2521.
6. Ravandi, F., et al. 2009. Superior outcome with hypomethylating therapy in patients with acute myeloid leukemia and high-risk myelodysplastic syndrome and chromosome 5 and 7 abnormalities. Cancer 115: 5746-5751.
7. Sazawal, S., et al. 2009. Haematological & molecular profile of acute myelogenous leukaemia in India. Indian J. Med. Res. 129: 256-261.

CHROMOSOMAL LOCATION

Genetic locus: FEM1C (human) mapping to 5q22.3.

PRODUCT

FEM1C 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FEM1C shRNA Plasmid (h): sc-91928-SH and FEM1C shRNA (h) Lentiviral Particles: sc-91928-V as alternate gene silencing products.

For independent verification of FEM1C (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-91928A, sc-91928B and sc-91928C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

FEM1C siRNA (h) is recommended for the inhibition of FEM1C 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 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 FEM1C gene expression knockdown using RT-PCR Primer: FEM1C (h)-PR: sc-91928-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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