SANTA CRUZ BIOTECHNOLOGY, INC.

FAM110B siRNA (h): sc-77299

BACKGROUND

FAM110B (familiarity with sequence similarity 110, member B) is a 370 amino acid protein, which contains several motifs that are conserved among FAM110 family members and a proline-rich region through which it probably binds proteins. Localized to the nucleus where they associate with centrosomes, FAM110A, FAM110B and FAM110C accumulate at the spindle poles during mitosis. Expression of FAM110B and FAM110C impairs cell cycle progression through G_1 phase. FAM110B is expressed in testis, thyroid and spleen and is found at lower levels in ovary, adrenal gland, stomach, trachea, intestine, lymph node, spinal cord and prostate. The gene encoding FAM110B maps to human chromosome 8, which is made up of nearly 146 million bases and encodes about 800 genes. Chromosome 8 is also associated with Pfeiffer syndrome, congenital hypothyroidism and Waardenburg syndrome.

REFERENCES

1. Wang, Q., Hirohashi, Y., Furuuchi, K., Zhao, H., Liu, Q., Zhang, H., Murali, R., Berezov, A., Du, X., Li, B. and Greene, M.I. 2004. The centrosome in normal and transformed cells. DNA Cell Biol. 23: 475-489.
2. Doxsey, S., Zimmerman, W. and Mikule, K. 2005. Centrosome control of the cell cycle. Trends Cell Biol. 15: 303-311.
3. Manneville, J.B. and Etienne-Manneville, S. 2006. Positioning centrosomes and spindle poles: looking at the periphery to find the centre. Biol. Cell 98: 557-565.
4. Patzke, S., Stokke, T. and Aasheim, H.C. 2006. CSPP and CSPP-L associate with centrosomes and microtubules and differently affect microtubule organization. J. Cell. Physiol. 209: 199-210.
5. Hauge, H., Patzke, S. and Aasheim, H.C. 2007. Characterization of the FAM110 gene family. Genomics 90: 14-27.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611394. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: FAM110B (human) mapping to 8q12.1.

PRODUCT

FAM110B 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 FAM110B shRNA Plasmid (h): sc-77299-SH and FAM110B shRNA (h) Lentiviral Particles: sc-77299-V as alternate gene silencing products.

For independent verification of FAM110B (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-77299A, sc-77299B and sc-77299C.

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

FAM110B siRNA (h) is recommended for the inhibition of FAM110B 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 FAM110B gene expression knockdown using RT-PCR Primer: FAM110B (h)-PR: sc-77299-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Xie, M., Cai, L., Li, J., Zhao, J., Guo, Y., Hou, Z., Zhang, X., Tian, H., Li, A. and Miao, Y. 2020. FAM110B inhibits non-small cell lung cancer cell proliferation and invasion through inactivating Wnt/β-catenin signaling. Onco Targets Ther. 13: 4373-4384.

RESEARCH USE

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