

## 2610039C10Rik siRNA (m): sc-108795

### BACKGROUND

Mapping to chromosome 21, the FASP1 gene (FAPP1-associated protein 1) encodes a 233 amino acid protein that is homologous to the fission yeast protein Mis18. In yeast, Mis18 is localized to the centrosome and forms a complex with Mis16 to maintain the deacetylated state of histones specifically in the central core of centromeres. FASP1, also known as protein Mis18- $\alpha$  and C21orf45, is required for the recruitment of CENP-A to centrosomes and is thereby essential for normal chromosome segregation during mitosis. With expression in testis, FASP1 exists as a homodimer, a heterodimer with MIS18B or is present in a complex containing other Mis18 family members. FASP1 has been shown to bind to pp5644 in Hela cells, where overexpression of pp5644 leads to inhibited growth and colony formation.

### REFERENCES

1. Tyson, J., Tranebjaerg, L., Bellman, S., Wren, C., Taylor, J.F., Bathen, J., Aslaksen, B., Sørland, S.J., Lund, O., Malcolm, S., Pembrey, M., Bhat-tacharya, S. and Bitner-Glindzicz, M. 1997. IsK and KvLQT1: mutation in either of the two subunits of the slow component of the delayed rectifier potassium channel can cause Jervell and Lange-Nielsen syndrome. *Hum. Mol. Genet.* 6: 2179-2185.
2. Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
3. Hayashi, T., Fujita, Y., Iwasaki, O., Adachi, Y., Takahashi, K. and Yanagida, M. 2004. Mis16 and Mis18 are required for CENP-A loading and histone deacetylation at centromeres. *Cell* 118: 715-729.
4. Ye, X.X., Lu, H., Yu, Y., Ding, N., Zhang, N.L., Huo, K.K., Wan, D.F., Li, Y.Y. and Gu, J.R. 2005. P5644 interacts with phosphatidylinositol-4-phosphate adaptor protein-1 associated protein-1. *Mol. Cell. Biochem.* 271: 151-158.
5. Mao, R., Wang, X., Spitznagel, E.L., Jr., Frelín, L.P., Ting, J.C., Ding, H., Kim, J.W., Ruczinski, I., Downey, T.J. and Pevsner, J. 2005. Primary and secondary transcriptional effects in the developing human Down syndrome brain and heart. *Genome Biol.* 6: R107.
6. Robakis, N.K. 2006. The discovery and mapping to chromosome 21 of the Alzheimer's amyloid gene: history revised. *J. Alzheimers Dis.* 10: 453-455.
7. Ait Yahya-Graisson, E., Aubert, J., Dauphinot, L., Rivals, I., Prieur, M., Golfier, G., Rossier, J., Personnaz, L., Creau, N., Blehaut, H., Robin, S., Delabar, J.M. and Potier, M.C. 2007. Classification of human chromosome 21 gene-expression variations in Down syndrome: impact on disease phenotypes. *Am. J. Hum. Genet.* 81: 475-491.
8. Peterson, L.F., Boyapati, A., Ahn, E.Y., Biggs, J.R., Okumura, A.J., Lo, M.C., Yan, M. and Zhang, D.E. 2007. Acute myeloid leukemia with the 8q22;21q22 translocation: secondary mutational events and alternative t(8;21) transcripts. *Blood* 110: 799-805.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

### CHROMOSOMAL LOCATION

Genetic locus: Mis18a (mouse) mapping to 16 C3.3.

### PRODUCT

2610039C10Rik siRNA (m) is a pool of 2 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see 2610039C10Rik shRNA Plasmid (m): sc-108795-SH and 2610039C10Rik shRNA (m) Lentiviral Particles: sc-108795-V as alternate gene silencing products.

For independent verification of 2610039C10Rik (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-108795A and sc-108795B.

### 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

2610039C10Rik siRNA (m) is recommended for the inhibition of 2610039C10Rik 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  $\mu$ M in 66  $\mu$ 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 2610039C10Rik gene expression knockdown using RT-PCR Primer: 2610039C10Rik (m)-PR: sc-108795-PR (20  $\mu$ 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.