

220000115Rik siRNA (m): sc-108609

BACKGROUND

FAM25 (family with sequence similarity 25) is an 89 amino acid protein encoded by a gene that maps to human chromosome 10q11.23. Chromosome 10 contains over 800 genes and 35 million nucleotides, making up nearly 4.5% of the human genome. PTEN is an important tumor suppressor gene located on chromosome 10 and, when defective, causes a genetic predisposition to cancer development known as Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging. Tetrahydrobiopterin deficiency and a number of syndromes involving defective skull and facial bone fusion are also linked to chromosome 10. As with most trisomies, trisomy 10 is rare and is deleterious.

REFERENCES

1. Troelstra, C., Landsvater, R.M., Wiegant, J., van der Ploeg, M., Viel, G., Buys, C.H. and Hoeijmakers, J.H. 1992. Localization of the nucleotide excision repair gene ERCC6 to human chromosome 10q11-q21. *Genomics* 12: 745-749.
2. Teresi, R.E., Zbuk, K.M., Pezzolesi, M.G., Waite, K.A. and Eng, C. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
3. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.
4. Carter, M.T., Dyack, S. and Richer, J. 2010. Distal trisomy 10q syndrome: phenotypic features in a child with inverted duplicated 10q25.1-q26.3. *Clin. Dysmorphol.* 19: 140-145.
5. Laugel, V., Dalloz, C., Durand, M., Sauvanaud, F., Kristensen, U., Vincent, M.C., Pasquier, L., Odent, S., Cormier-Daire, V., Gener, B., Tobias, E.S., Tolmie, J.L., Martin-Coignard, D., Drouin-Garraud, V., Heron, D., et al. 2010. Mutation update for the CSB/ERCC6 and CSA/ERCC8 genes involved in Cockayne syndrome. *Hum. Mutat.* 31: 113-126.
6. Yuan, J., McDonough, C., Kulharya, A., Ramalingam, P. and Manaloor, E. 2010. Isolated trisomy 10 in an infant with acute myeloid leukemia: a case report and review of literature. *Int. J. Clin. Exp. Pathol.* 3: 718-722.

CHROMOSOMAL LOCATION

Genetic locus: Fam25c (mouse) mapping to 14 B.

PRODUCT

220000115Rik 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see 220000115Rik shRNA Plasmid (m): sc-108609-SH and 220000115Rik shRNA (m) Lentiviral Particles: sc-108609-V as alternate gene silencing products.

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

APPLICATIONS

220000115Rik siRNA (m) is recommended for the inhibition of 220000115Rik 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 μ M in 66 μ 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.

RESEARCH USE

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