SANTA CRUZ BIOTECHNOLOGY, INC.

Keratin 26 siRNA (m): sc-146407

BACKGROUND

Keratin 26, also known as Keratin type I cytoskeletal 26, KRT26, Cytokeratin-26, Keratin-25B or KRT25B, is a 468 amino acid protein that belongs to the intermediate filament family and exists as a heterotetramer of 2 type I and 2 type II keratins. While it is strongly expressed in skin and scalp, Keratin 26 is weakly expressed in thymus and tongue. In the hair follicle, expression of Keratin 26 is restricted to the mid- to upper inner root sheath cuticle, being present slightly above the apex of the dermal papilla. The gene that encodes Keratin 26 maps to human chromosome 17q21.2. Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes.

REFERENCES

1. Rogers, M.A., et al. 2004. The human type I keratin gene family: characterization of new hair follicle specific members and evaluation of the chromosome 17q21.2 gene domain. Differentiation 72: 527-540.
2. Schweizer, J., et al. 2006. New consensus nomenclature for mammalian keratins. J. Cell Biol. 174: 169-174.
3. Langbein, L., et al. 2006. K25 (K25irs1), K26 (K25irs2), K27 (K25irs3), and K28 (K25irs4) represent the type I inner root sheath keratins of the human hair follicle. J. Invest. Dermatol. 126: 2377-2386.
4. Dann, R.B., et al. 2007. Strategies for ovarian cancer prevention. Obstet. Gynecol. Clin. North Am. 34: 667-686.
5. Farrell, C.J., et al. 2007. Genetic causes of brain tumors: neurofibromatosis, tuberous sclerosis, von Hippel-Lindau, and other syndromes. Neurol. Clin. 25: 925-946.
6. Suela, J., et al. 2007. Neurofibromatosis 1, and not TP53, seems to be the main target of chromosome 17 deletions in *de novo* acute myeloid leukemia. J. Clin. Oncol. 25: 1151-1152.
7. Tai, Y.C., et al. 2007. Breast cancer risk among male BRCA1 and BRCA2 mutation carriers. J. Natl. Cancer Inst. 99: 1811-1814.
8. Yan, J., et al. 2007. Blimp-1 regulates cell growth through repression of p53 transcription. Proc. Natl. Acad. Sci. USA 104: 1841-1846.
9. Murakami, N., et al. 2008. Novel deletion mutation in GFAP gene in an infantile form of Alexander disease. Pediatr. Neurol. 38: 50-52.

CHROMOSOMAL LOCATION

Genetic locus: Krt26 (mouse) mapping to 11 D.

PRODUCT

Keratin 26 siRNA (m) 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 Keratin 26 shRNA Plasmid (m): sc-146407-SH and Keratin 26 shRNA (m) Lentiviral Particles: sc-146407-V as alternate gene silencing products.

For independent verification of Keratin 26 (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-146407A, sc-146407B and sc-146407C.

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

Keratin 26 siRNA (m) is recommended for the inhibition of Keratin 26 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 Keratin 26 gene expression knockdown using RT-PCR Primer: Keratin 26 (m)-PR: sc-146407-PR (20 µl). 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.

PROTOCOLS

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