SANTA CRUZ BIOTECHNOLOGY, INC.

POTE21 siRNA (h): sc-105068

BACKGROUND

ANKRD21 (ankyrin repeat domain-containing protein 21), also known as A26B3, POTE or POTE21, is a 584 amino acid peripheral membrane protein that contains six ankyrin repeats and belongs to the POTE family. Expressed in testis, ovary and placental tissue, as well as in prostate cancer cell lines, ANKRD21 is thought to play a role in reproductive processes, such as spermatogenesis, and may be involved in tumor progression. The gene encoding ANKRD21 maps to chromosome 21, which houses approximately 300 genes and comprises nearly 1.5% of the human genome. Chromosome 21-associated disorders include Alzheimer's disease, amyotrophic lateral sclerosis and, most notably, Down syndrome (also known as trisomy 21).

REFERENCES

1. Bera, T.K., et al. 2002. POTE, a highly homologous gene family located on numerous chromosomes and expressed in prostate, ovary, testis, placenta, and prostate cancer. Proc. Natl. Acad. Sci. USA 99: 16975-16980.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607549. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Bera, T.K., et al. 2004. Five POTE paralogs and their splice variants are expressed in human prostate and encode proteins of different lengths. Gene 337: 45-53.
4. Bera, T.K., et al. 2006. POTE paralogs are induced and differentially expressed in many cancers. Cancer Res. 66: 52-56.
5. Hahn, Y., et al. 2006. Duplication and extensive remodeling shaped POTE family genes encoding proteins containing ankyrin repeat and coiled coil domains. Gene 366: 238-245.
6. Das, S., et al. 2007. Palmitoylation of POTE family proteins for plasma membrane targeting. Biochem. Biophys. Res. Commun. 363: 751-756.
7. Ise, T., et al. 2008. Expression of POTE protein in human testis detected by novel monoclonal antibodies. Biochem. Biophys. Res. Commun. 365: 603-608.
8. Bera, T.K., et al. 2008. Selective POTE paralogs on chromosome 2 are expressed in human embryonic stem cells. Stem Cells Dev. 17: 325-332.

CHROMOSOMAL LOCATION

Genetic locus: POTED (human) mapping to 21q11.2.

PRODUCT

POTE21 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see POTE21 shRNA Plasmid (h): sc-105068-SH and POTE21 shRNA (h) Lentiviral Particles: sc-105068-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 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

POTE21 siRNA (h) is recommended for the inhibition of POTE21 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 POTE21 gene expression knockdown using RT-PCR Primer: POTE21 (h)-PR: sc-105068-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.