SANTA CRUZ BIOTECHNOLOGY, INC.

BCLP siRNA (m): sc-141675

BACKGROUND

BCLP (β-casein-like protein), also known as TMEM54 (transmembrane protein 54) or protein CAC-1, is a 222 amino acid multi-pass membrane protein that is ubiquitously expressed in cancer cell lines. Introduction of BCLP cDNA into L929 cells results in a down-regulation of cell growth rate, a significant increase in cell area and a decrease in cell attachment. This evidence suggests that BCLP is assoicated with regulation of tumor growth patterns and cellular morphology. Expression of BCLP mRNA seems to be associated with recurrence of uterine cancer in women who have already been diagnosed. The gene encoding BCLP maps to human chromosome 1p35.1, which spans about 260 million base pairs and makes up 8% of the human genome. There are three isoforms of BCLP that are produced as a result of alternative splicing events.

REFERENCES

1. Suzuki, T., et al. 1998. Cloning and characterization of a cDNA fragment coding β-casein-like protein preferentially expressed in cervical adenocarcinoma cell line CAC-1. Cancer Lett. 124: 165-171.
2. Baba, T., et al. 2001. Specific detection of circulating tumor cells by reverse transcriptase-polymerase chain reaction of a β-casein-like protein, preferentially expressed in malignant neoplasms. Anticancer Res. 21: 2547-2551.
3. Baba, T., et al. 2001. Cloning and characterization of a tumor-associated antigen, β-casein-like protein. Biochem. Biophys. Res. Commun. 284: 340-345.
4. Schutte, B.C., et al. 2001. Report and abstracts of the sixth international workshop on human chromosome 1 mapping 2000. Iowa City, Iowa, USA 30 September-3 October 2000. Cytogenet. Cell Genet. 92: 23-41.
5. Murphy, W.J., et al. 2003. The origin of human chromosome 1 and its homologs in placental mammals. Genome Res. 13: 1880-1888.
6. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.

CHROMOSOMAL LOCATION

Genetic locus: Tmem54 (mouse) mapping to 4 D2.2.

PRODUCT

BCLP 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BCLP shRNA Plasmid (m): sc-141675-SH and BCLP shRNA (m) Lentiviral Particles: sc-141675-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

BCLP siRNA (m) is recommended for the inhibition of BCLP 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 BCLP gene expression knockdown using RT-PCR Primer: BCLP (m)-PR: sc-141675-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.