SANTA CRUZ BIOTECHNOLOGY, INC.

BLCAP siRNA (h): sc-72653

BACKGROUND

BLCAP (Bladder cancer-associated protein) is an 87 amino acid highly conserved multi-pass transmembrane protein that is highly expressed in normal esophagus, thyroid and brain tissue. Overexpression of BLCAP inhibits cell growth and initiates apoptosis via upregulation of p21 and downregulation of Bcl-x_L and Bcl-2. Since p53 and NFκB activity remain unchanged, the regulation of the cell cycle and apoptosis by BLCAP represents a novel pathway independent of p53 and NFκB. Transcription of the gene encoding BLCAP is almost completely repressed in high invasive transitional cell carcinomas. Additionally, BLCAP is expressed in all non-cancerous cervical tissues, but expression is lost in primary cervical cancer tissue. This evidence suggests that BLCAP may be a suitable marker for carcinogenic invasiveness and progression.

REFERENCES

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3. Su, H.C., et al. 2003. Relationship between expression of BLCAP protein and malignancy of osteosarcoma. Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi 19: 465-466.
4. Clutterbuck, D.R., et al. 2005. A bioinformatic screen for novel A-I RNA editing sites reveals recoding editing in BC10. Bioinformatics 21: 2590-2595.
5. Evans, H.K., et al. 2005. Comparative phylogenetic analysis of blcap/nnat reveals eutherian-specific imprinted gene. Mol. Biol. Evol. 22: 1740-1748.
6. Levanon, E.Y., et al. 2005. Evolutionarily conserved human targets of adenosine to inosine RNA editing. Nucleic Acids Res. 33: 1162-1168.
7. Zuo, Z., et al. 2006. Functional analysis of bladder cancer-related protein gene: a putative cervical cancer tumor suppressor gene in cervical carcinoma. Tumour Biol. 27: 221-226.
8. Yao, J., et al. 2007. Overexpression of BLCAP induces S phase arrest and apoptosis independent of p53 and NFκB in human tongue carcinoma: BLCAP overexpression induces S phase arrest and apoptosis. Mol. Cell. Biochem. 297: 81-92.

CHROMOSOMAL LOCATION

Genetic locus: BLCAP (human) mapping to 20q11.23.

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.

PRODUCT

BLCAP siRNA (h) 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 BLCAP shRNA Plasmid (h): sc-72653-SH and BLCAP shRNA (h) Lentiviral Particles: sc-72653-V as alternate gene silencing products.

For independent verification of BLCAP (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72653A, sc-72653B and sc-72653C.

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

BLCAP siRNA (h) is recommended for the inhibition of BLCAP 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 BLCAP gene expression knockdown using RT-PCR Primer: BLCAP (h)-PR: sc-72653-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.