SANTA CRUZ BIOTECHNOLOGY, INC.

BLU siRNA (m): sc-141716

BACKGROUND

The human BLU gene maps to chromosome 3p21.3 and is a potential tumor suppressor gene. Methylation of the BLU promoter region correlates with downregulation of BLU transcript expression in tumor cell lines. The high incidence of BLU alterations also suggests its involvement in the development of nasopharyngeal carcinoma as well as non-small cell lung cancers. Transcripts of this soluble, cytoplasmic protein occur in lung tissue, with trace expression in kidney, liver, placenta, and brain. Expression of a shorter isoform occurs in testis.

REFERENCES

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2. Agathanggelou, A., et al. 2003 Epigenetic inactivation of the candidate 3p21.3 suppressor gene BLU in human cancers. Oncogene 22: 1580-1588.
3. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607070. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Hesson, L., et al. 2004. Frequent epigenetic inactivation of RASSF1A and BLU genes located within the critical 3p21.3 region in gliomas. Oncogene 23: 2408-2419.
5. Qiu, G.H., et al. 2004. The candidate tumor suppressor gene BLU, located at the commonly deleted region 3p21.3, is an E2F-regulated, stress-responsive gene and inactivated by both epigenetic and genetic mechanisms in nasopharyngeal carcinoma. Oncogene 23: 4793-4806.
6. Abe, M., et al. 2005. CpG island methylator phenotype is a strong determinant of poor prognosis in neuroblastomas. Cancer Res. 65: 828-834.
7. Marsit, C.J., et al. 2005. Hypermethylation of RASSF1A and BLU tumor suppressor genes in non-small cell lung cancer: implications for tobacco smoking during adolescence. Int. J. Cancer 114: 219-223.
8. Tischoff, I., et al. 2005. Allele loss and epigenetic inactivation of 3p21.3 in malignant liver tumors. Int. J. Cancer 115: 684-689.

CHROMOSOMAL LOCATION

Genetic locus: Zmynd10 (mouse) mapping to 9 F1.

PRODUCT

BLU 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 BLU shRNA Plasmid (m): sc-141716-SH and BLU shRNA (m) Lentiviral Particles: sc-141716-V as alternate gene silencing products.

For independent verification of BLU (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-141716A, sc-141716B and sc-141716C.

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

BLU siRNA (m) is recommended for the inhibition of BLU 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 BLU gene expression knockdown using RT-PCR Primer: BLU (m)-PR: sc-141716-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.