SANTA CRUZ BIOTECHNOLOGY, INC.

BRCC2 siRNA (h): sc-96672

BACKGROUND

BRCC2 (breast cancer cell protein 2), also known as BLID (BH3-like motif containing, cell death inducer) is a 108 amino acid protein that is ubiquitously expressed and functions in proaptosis during the caspase-dependent mitochondrial pathway of cell death. Though BRCC2 normally localizes to cytosol, it can also be found in mitochondria. BRCC2 has been identified as a prognostic factor in breast cancer and acts as a binding partner for Bcl-x_L. The gene encoding BRCC2 maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

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3. Rogaeva, E., et al. 2007. The neuronal sortilin-related receptor SORL1 is genetically associated with Alzheimer disease. Nat. Genet. 39: 168-177.
4. Cavalli, L.R., et al. 2008. Assignment of the BLID gene to 11q24.1 by fluorescence *in situ* hybridization. Cancer Genet. Cytogenet. 186: 120-121.
5. Bhuiyan, Z.A., et al. 2008. An intronic mutation leading to incomplete skipping of exon-2 in KCNQ1 rescues hearing in Jervell and Lange-Nielsen syndrome. Prog. Biophys. Mol. Biol. 98: 319-327.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 608853. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
7. Coldren, C.D., et al. 2009. Chromosomal microarray mapping suggests a role for BSX and Neurogranin in neurocognitive and behavioral defects in the 11q terminal deletion disorder (Jacobsen syndrome). Neurogenetics. 10: 89-95.

CHROMOSOMAL LOCATION

Genetic locus: BLID (human) mapping to 11q24.1.

PRODUCT

BRCC2 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 BRCC2 shRNA Plasmid (h): sc-96672-SH and BRCC2 shRNA (h) Lentiviral Particles: sc-96672-V as alternate gene silencing products.

For independent verification of BRCC2 (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-96672A, sc-96672B and sc-96672C.

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

BRCC2 siRNA (h) is recommended for the inhibition of BRCC2 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 BRCC2 gene expression knockdown using RT-PCR Primer: BRCC2 (h)-PR: sc-96672-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Li, X., et al. 2013. BRCC2 inhibits breast cancer cell growth and metastasis *in vitro* and *in vivo* via downregulating Akt pathway. Cell Death Dis. 4: e757.

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.