SANTA CRUZ BIOTECHNOLOGY, INC.

ZBRK1 siRNA (h): sc-61824

BACKGROUND

The transcpritional repressor ZBRK1, also designated zinc finger and BRCA1-interacting protein with a KRAB domain 1 or zinc finger protein 350, belongs to the Krüppel C_2H_2-type zinc-finger protein family of proteins. ZBRK1 localizes mainly to the nucleus and may be associated with the nuclear matrix. It is a widely expressed protein that binds to BRCA1. ZBRK1 plays an important role in transcriptional regulation. Likely targets of gene regulation are DNA damage response genes, which effect the survival and growth control of cells. ZBRK1 contains an N-terminal KRAB domain, a C-terminal BRCA1-binding region and eight central zinc-fingers.

REFERENCES

1. Zheng, L., et al. 2000 Sequence-specific transcriptional corepressor function for BRCA1 through a novel zinc finger protein, ZBRK1. Mol. Cell 6: 757-768.
2. Rutter, J.L., et al. 2003. Mutational analysis of the BRCA1-interacting genes ZNF350/ZBRK1 and BRIP1/BACH1 among BRCA1 and BRCA2-negative probands from breast-ovarian cancer families and among early-onset breast cancer cases and reference individuals. Hum. Mutat. 22: 121-128.
3. Garcia, V., et al. 2004. Altered expression of the ZBRK1 gene in human breast carcinomas. J. Pathol. 202: 224-232.
4. Tan, W., et al. 2004. Tetrameric oligomerization mediates transcriptional repression by the BRCA1-dependent Krüppel-associated box-zinc finger protein ZBRK1. J. Biol. Chem. 279: 55153-55160.
5. Garcia, V., et al. 2005. The GADD45, ZBRK1 and BRCA1 pathway: quantitative analysis of mRNA expression in colon carcinomas. J. Pathol. 206: 92-99.
6. Liao, G., et al. 2005. The Epstein-Barr virus replication protein BBLF2/3 provides an origin-tethering function through interaction with the zinc finger DNA binding protein ZBRK1 and the KAP-1 corepressor. J. Virol. 79: 245-256.
7. Furuta, S., et al. 2006. Removal of BRCA1/CtIP/ZBRK1 repressor complex on ANG1 promoter leads to accelerated mammary tumor growth contributed by prominent vasculature. Cancer Cell 10: 13-24.

CHROMOSOMAL LOCATION

Genetic locus: ZNF350 (human) mapping to 19q13.41.

PRODUCT

ZBRK1 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 ZBRK1 shRNA Plasmid (h): sc-61824-SH and ZBRK1 shRNA (h) Lentiviral Particles: sc-61824-V as alternate gene silencing products.

For independent verification of ZBRK1 (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-61824A, sc-61824B and sc-61824C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

ZBRK1 siRNA (h) is recommended for the inhibition of ZBRK1 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 ZBRK1 gene expression knockdown using RT-PCR Primer: ZBRK1 (h)-PR: sc-61824-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.