SANTA CRUZ BIOTECHNOLOGY, INC.

ARID3B siRNA (h): sc-90156

BACKGROUND

ARID3B (AT rich interactive domain 3B), also known as DRIL2 or BDP (bright and dead ringer protein) in humans and bright-like (for B cell regulator of IgH transcription-like) in mice, is one of the mammalian homologs of the *Drosophila* Dri (dead ringer) protein. ARID3B also shares homology with RBP1 and RBP2 (retinoblastoma binding proteins 1 and 2). ARID3B represents a member of a unique family of DNA-binding proteins that have roles in cell lineage gene regulation, cell cycle control, embryonic patterning and transcriptional regulation. ARID3B localizes to the nucleus and contains an A/T-rich DNA-binding (ARID) domain. Functioning as a transcription factor, ARID3B associates in a heterodimer with the related protein ARID3A and is believed to play an important role in neural crest survival during embryogenesis. In addition, ARID3B may participate in malignant transformation and neuroblastoma growth, suggesting a possible use of ARID3B as a tumor marker for neuroblastoma.

REFERENCES

1. Kortschak, R.D., et al. 1998. The human dead ringer/bright homolog, DRIL1: cDNA cloning, gene structure, and mapping to D19S886, a marker on 19p13.3 that is strictly linked to the Peutz-Jeghers syndrome. Genomics 51: 288-292.
2. Numata, S., et al. 1999. Bdp, a new member of a family of DNA-binding proteins, associates with the retinoblastoma gene product. Cancer Res. 59: 3741-3747.
3. Kortschak, R.D., et al. 2000. ARID proteins come in from the desert. Trends Biochem. Sci. 25: 294-299.
4. Kobayashi, K., et al. 2006. ARID3B induces malignant transformation of mouse embryonic fibroblasts and is strongly associated with malignant neuroblastoma. Cancer Res. 66: 8331-8336.
5. Kim, D., et al. 2006. A regulated nucleocytoplasmic shuttle contributes to Bright's function as a transcriptional activator of immunoglobulin genes. Mol. Cell. Biol. 26: 2187-2201.

CHROMOSOMAL LOCATION

Genetic locus: ARID3B (human) mapping to 15q24.1.

PRODUCT

ARID3B 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 ARID3B shRNA Plasmid (h): sc-90156-SH and ARID3B shRNA (h) Lentiviral Particles: sc-90156-V as alternate gene silencing products.

For independent verification of ARID3B (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-90156A, sc-90156B and sc-90156C.

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

ARID3B siRNA (h) is recommended for the inhibition of ARID3B 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.

GENE EXPRESSION MONITORING

ARID3B (C-6): sc-514741 is recommended as a control antibody for monitoring of ARID3B gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ARID3B gene expression knockdown using RT-PCR Primer: ARID3B (h)-PR: sc-90156-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.