SANTA CRUZ BIOTECHNOLOGY, INC.

Bcl-9 siRNA (h): sc-72629

BACKGROUND

Bcl-9 (B cell CLL/lymphoma 9 protein) is a nuclear protein encoded by the human gene BCL9. Bcl-9 belongs to the BCL9 family and is involved in the Wnt signaling pathway. The Wnt signaling pathway controls numerous cell fates during animal development. A malfunction in Wnt signaling activity can lead to cancer in many human tissues. A key effector of the canonical Wnt pathway is β-catenin (or *Drosophila* armadillo), a highly unstable phosphorylated protein that shuttles rapidly between nucleus and cytoplasm. A nuclear complex, consisting of Bcl-9/Bcl-9L, β-catenin and other proteins, activates transcription of several Wnt target genes, including FGF-20, WISP-1, Myc and Glucagon.

REFERENCES

1. Fuerer, C., et al. 2006. Fusion of the Bcl-9 HD2 domain to E1A increases the cytopathic effect of an oncolytic adenovirus that targets colon cancer cells. BMC Cancer 6: 236-236.
2. Sampietro, J., et al. 2006. Crystal structure of a β-catenin/Bcl-9/Tcf4 complex. Mol. Cell 24: 293-300.
3. Hoffmans, R. and Basler, K. 2006. Bcl-9-2 binds Arm/β-catenin in a Tyr142-independent manner and requires pygopus for its function in Wg/Wnt signaling. Mech. Dev. 124: 59-67.
4. Sakamoto, I., et al. 2007. Upregulation of a Bcl-9-related β-catenin-binding protein, B9L, in different stages of sporadic colorectal adenoma. Cancer Sci. 98: 83-87.
5. de la Roche, M. and Bienz, M. 2007. Wingless-independent association of pygopus with dTCF target genes. Curr. Biol. 17: 556-561.
6. Nakamura, Y., et al. 2007. Crystal structure analysis of the PHD domain of the transcription co-activator pygopus. J. Mol. Biol. 370: 80-92.

CHROMOSOMAL LOCATION

Genetic locus: BCL9 (human) mapping to 1q21.2.

PRODUCT

Bcl-9 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 Bcl-9 shRNA Plasmid (h): sc-72629-SH and Bcl-9 shRNA (h) Lentiviral Particles: sc-72629-V as alternate gene silencing products.

For independent verification of Bcl-9 (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-72629A, sc-72629B and sc-72629C.

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.

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

Bcl-9 siRNA (h) is recommended for the inhibition of Bcl-9 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

Bcl-9 (2071C3a): sc-81199 is recommended as a control antibody for monitoring of Bcl-9 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bcl-9 gene expression knockdown using RT-PCR Primer: Bcl-9 (h)-PR: sc-72629-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.