SANTA CRUZ BIOTECHNOLOGY, INC.

Diversin siRNA (h): sc-95219

BACKGROUND

Diversin, also known as ANKRD6 (ankyrin repeat domain 6), is a 727 amino acid protein that contains eight ankyrin repeats and belongs to the ankyrin repeat domain protein family. Members of the ankyrin repeat domain family facilitate protein-protein interactions and function as adaptors of signaling pathways. Expressed in a developmentally-regulated manner and at highest levels in the brain, Diversin is believed to play a role in brain development. Via its ankyrin repeats, Diversin can directly interact with Dvl (dishevelled), an interaction that is essential for the activation of noncanonical Wnt signaling. In addition, Diversin contains a C-terminal domain that binds Axin/Conductin and a casein kinase-binding domain in its central region that specifically binds casein kinase Iε. Through the action of these additional domains, Diversin may also facilitate canonical Wnt signaling. Due to alternative splicing events, three Diversin isoforms exist.

REFERENCES

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2. Tissir, F., et al. 2002. Expression of the ankyrin repeat domain 6 gene (Ankrd6) during mouse brain development. Dev. Dyn. 224: 465-469.
3. Schwarz-Romond, T., et al. 2002. The ankyrin repeat protein Diversin recruits Casein kinase Iepsilon to the β-catenin degradation complex and acts in both canonical Wnt and Wnt/JNK signaling. Genes Dev. 16: 2073-2084.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610583. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Katoh, M., et al. 2005. Identification and characterization of rat Ankrd6 gene in silico. Int. J. Mol. Med. 15: 359-363.
6. Katoh, Y., et al. 2006. Comparative integromics on FAT1, FAT2, FAT3 and FAT4. Int. J. Mol. Med. 18: 523-528.

CHROMOSOMAL LOCATION

Genetic locus: ANKRD6 (human) mapping to 6q15.

PRODUCT

Diversin 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 Diversin shRNA Plasmid (h): sc-95219-SH and Diversin shRNA (h) Lentiviral Particles: sc-95219-V as alternate gene silencing products.

For independent verification of Diversin (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-95219A, sc-95219B and sc-95219C.

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

Diversin siRNA (h) is recommended for the inhibition of Diversin 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

Diversin (G-9): sc-365390 is recommended as a control antibody for monitoring of Diversin 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 Diversin gene expression knockdown using RT-PCR Primer: Diversin (h)-PR: sc-95219-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.