SANTA CRUZ BIOTECHNOLOGY, INC.

SNAP 29 siRNA (h): sc-76531

BACKGROUND

SNAP 29 (synaptosomal-associated protein, 29 kDa), also known as CEDNIK, is a 258 amino acid protein that localizes to the membrane and the cytoplasm, as well as to the cell junction, and contains one t-SNARE coiled-coil homology domain. Expressed in liver, heart, brain, kidney, placenta, lung, spleen, pancreas and skeletal muscle, SNAP 29 binds tightly to Syntaxins and, via this binding, is involved in membrane trafficking events. Defects in the gene encoding SNAP 29 are the cause of CEDNIK syndrome, a neurocutaneous syndrome that is associated with cerebral dysgenesis, neuropathy, ichthyosis and palmoplantar keratoderma. The gene encoding SNAP 29 maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Steegmaier, M., et al. 1998. Three novel proteins of the Syntaxin/SNAP 25 family. J. Biol. Chem. 273: 34171-34179.
2. Hohenstein, A.C., et al. 2001. SNAP 29 is a promiscuous Syntaxin-binding SNARE. Biochem. Biophys. Res. Commun. 285: 167-171.
3. Rotem-Yehudar, R., et al. 2001. Association of Insulin-like growth factor 1 receptor with EHD1 and SNAP 29. J. Biol. Chem. 276: 33054-33060.
4. Saito, T., et al. 2001. Polymorphism in SNAP 29 gene promoter region associated with schizophrenia. Mol. Psychiatry 6: 193-201.

CHROMOSOMAL LOCATION

Genetic locus: SNAP29 (human) mapping to 22q11.21.

PRODUCT

SNAP 29 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 SNAP 29 shRNA Plasmid (h): sc-76531-SH and SNAP 29 shRNA (h) Lentiviral Particles: sc-76531-V as alternate gene silencing products.

For independent verification of SNAP 29 (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-76531A, sc-76531B and sc-76531C.

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

SNAP 29 siRNA (h) is recommended for the inhibition of SNAP 29 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

SNAP 29 (E-5): sc-390602 is recommended as a control antibody for monitoring of SNAP 29 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 SNAP 29 gene expression knockdown using RT-PCR Primer: SNAP 29 (h)-PR: sc-76531-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. Lai, J.K.F., et al. 2017. 2BC non-structural protein of enterovirus A71 interacts with SNARE proteins to trigger autolysosome formation. Viruses 9: 169.
2. Lin, K.C., et al. 2018. Graphene oxide sensitizes cancer cells to chemotherapeutics by inducing early autophagy events, promoting nuclear trafficking and necrosis. Theranostics 8: 2477-2487.

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.