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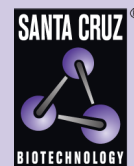
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Centaurin β 5 siRNA (m): sc-142272

BACKGROUND

ADP-ribosylation factor (ARF) family of small GTP-binding proteins are involved in vesicular transport regulation and controlling cytoskeletal organization and cell adhesion. These proteins are best characterized as regulators of membrane trafficking. The Centaurin GTPase-activating protein family comprise a subset of ARF regulatory molecules that transduce PI 3-kinase activation into coordinated control of Arf-dependent pathways. Centaurin β 5, also known as ACAP3 (Arf-GAP with coiled-coil, ANK repeat and PH domain-containing protein 3), is an 834 amino acid protein that contains three ANK repeats, one Arf-GAP domain and one PH domain. Predominantly expressed in the nervous system, mutations in the gene encoding Centaurin β 5 may be related to epilepsy and neurodegenerative processes. There are three isoforms of Centaurin β 5 that are produced as a result of alternative splicing events.

REFERENCES

1. Kam, J.L., et al. 2000. Phosphoinositide-dependent activation of the ADP-ribosylation factor GTPase-activating protein ASAP1. Evidence for the pleckstrin homology domain functioning as an allosteric site. *J. Biol. Chem.* 275: 9653-9663.
2. Randazzo, P.A., et al. 2004. Arf GAPs: multifunctional proteins that regulate membrane traffic and actin remodelling. *Cell. Signal.* 16: 401-413.
3. Randazzo, P.A., et al. 2007. Arf GAPs as regulators of the actin cytoskeleton. *Biol. Cell* 99: 583-600.
4. Moore, C.D., et al. 2007. The neuronal Arf GAP centaurin α 1 modulates dendritic differentiation. *J. Cell Sci.* 120: 2683-2693.
5. Inoue, H., et al. 2007. Arf GAPs and their interacting proteins. *Traffic* 8: 1465-1475.
6. Vashisht, A.A., et al. 2009. Centaurin-like protein Cnt5 contributes to arsenic and cadmium resistance in fission yeast. *FEMS Yeast Res.* 9: 257-269.

CHROMOSOMAL LOCATION

Genetic locus: *Acap3* (mouse) mapping to 4 E2.

PRODUCT

Centaurin β 5 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Centaurin β 5 shRNA Plasmid (m): sc-142272-SH and Centaurin β 5 shRNA (m) Lentiviral Particles: sc-142272-V as alternate gene silencing products.

For independent verification of Centaurin β 5 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-142272A, sc-142272B and sc-142272C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Centaurin β 5 siRNA (m) is recommended for the inhibition of Centaurin β 5 expression in mouse 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 μ M in 66 μ l. 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 Centaurin β 5 gene expression knockdown using RT-PCR Primer: Centaurin β 5 (m)-PR: sc-142272-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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