SANTA CRUZ BIOTECHNOLOGY, INC.

CCDC64 siRNA (m): sc-142130

BACKGROUND

BICD1 (Bicaudal D Homolog 1 *(Drosophila))* colocalizes with Rab 6A on the *trans-Golgi* network and on cytoplasmic vesicles, and is known to recruit the dynein-dynactin motor complex to regulate coat complex coatomer protein I (COPI)-independent Golgi-to-endoplasmic reticulum vacuolar transport. Belonging to the BICDR family, CCDC64, also known as Coiled-coil domain-containing protein 64A and BICDR1 (Bicaudal D-related protein 1), is a 488 amino acid protein that acts as a regulator of neurite outgrowth in developing neurons. Like BICD1, CCDC64 is a component of secretory vesicle machinery that regulates transport by controlling the accumulation of Rab6-containing secretory vesicles in the pericentrosomal region. This regulation inhibits neuritogenesis by restricting anterograde secretory transport during the initial phase of neuronal differentiation.

REFERENCES

1. Matanis, T., et al. 2002. Bicaudal-D regulates COPI-independent Golgi-ER transport by recruiting the dynein-dynactin motor complex. Nat. Cell Biol. 4: 986-992.
2. Claussen, M., et al. 2005. BicD-dependent localization processes: from *Drosophilia* development to human cell biology. Ann. Anat. 187: 539-553.
3. Coutelis, J.B., et al. 2007. Rab6 mediates membrane organization and determinant localization during *Drosophila* oogenesis. Development 134: 1419-1430.
4. Januschke, J., et al. 2007. Rab6 and the secretory pathway affect oocyte polarity in *Drosophila*. Development 134: 3419-3425.
5. Dienstbier, M., et al. 2009. Bicaudal-D and its role in cargo sorting by microtubule-based motors. Biochem. Soc. Trans. 37: 1066-1071.
6. Terenzio, M., et al. 2010. The more, the better: the BICD family gets bigger. EMBO J. 29: 1625-1626.
7. Schlager, M.A., et al. 2010. Pericentrosomal targeting of Rab6 secretory vesicles by Bicaudal-D-related protein 1 (BICDR-1) regulates neuritogenesis. EMBO J. 29: 1637-1651.

CHROMOSOMAL LOCATION

Genetic locus: Ccdc64 (mouse) mapping to 5 F.

PRODUCT

CCDC64 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CCDC64 shRNA Plasmid (m): sc-142130-SH and CCDC64 shRNA (m) Lentiviral Particles: sc-142130-V as alternate gene silencing products.

For independent verification of CCDC64 (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-142130A, sc-142130B and sc-142130C.

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

CCDC64 siRNA (m) is recommended for the inhibition of CCDC64 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CCDC64 gene expression knockdown using RT-PCR Primer: CCDC64 (m)-PR: sc-142130-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.