SANTA CRUZ BIOTECHNOLOGY, INC.

BICD1 siRNA (m): sc-141700

BACKGROUND

BICD1 [bicaudal D homolog 1 *(Drosophila)],* also known as cytoskeleton-like bicaudal D protein homolog 1, protein bicaudal D homolog 1, Bic-D 1 or BICD, is one of two human homologs of *Drosophila* BICD, and consists of 975 amino acids. BICD1 localizes to the Golgi apparatus, belongs to the BICD family and is expressed in skeletal muscle, brain and heart. BICD1 colocalizes with Rab 6A on the *trans*-Golgi network (TGN) 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. As a result of alternative splicing events, three BICD1 isoforms exist. BICD1 is encoded by a gene mapping to human chromosome 12p11.21, and is a likely component of a cytoskeleton-based mRNA sorting mechanism conserved during evolution.

REFERENCES

1. Baens, M., et al. 1995. Isolation and regional assignment of human chromosome 12p cDNAs. Genomics 29: 44-52.
2. Baens, M. and Marynen, P. 1997. A human homologue (BICD1) of the *Drosophila* bicaudal D gene. Genomics 45: 601-606.
3. Bullock, S.L. and Ish-Horowicz, D. 2001. Conserved signals and machinery for RNA transport in *Drosophila* oogenesis and embryogenesis. Nature 414: 611-616.
4. 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.
5. Claussen, M. and Suter, B. 2005. BICD-dependent localization processes: from *Drosophilia* development to human cell biology. Ann. Anat. 187: 539-553.
6. Mangino, M., et al. 2008. A regulatory SNP of the BICD1 gene contributes to telomere length variation in humans. Hum. Mol. Genet. 17: 2518-2523.
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CHROMOSOMAL LOCATION

Genetic locus: Bicd1 (mouse) mapping to 6 G3.

PRODUCT

BICD1 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 BICD1 shRNA Plasmid (m): sc-141700-SH and BICD1 shRNA (m) Lentiviral Particles: sc-141700-V as alternate gene silencing products.

For independent verification of BICD1 (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-141700A, sc-141700B and sc-141700C.

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

BICD1 siRNA (m) is recommended for the inhibition of BICD1 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 BICD1 gene expression knockdown using RT-PCR Primer: BICD1 (m)-PR: sc-141700-PR (20 µl). 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.