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TBCD siRNA (m): sc-154117

BACKGROUND

Microtubules, the primary component of the cytoskeletal network, are highly dynamic structures composed of α/β Tubulin heterodimers. Biosynthesis of functional microtubules involve the participation of several chaperones, termed tubulin folding cofactors A (TBCA), D (TBCD), E (TBCE) and C (TBCC), that act on folding intermediates downstream of the cytosolic chaperon, alternatively named TCP. TBCD (Tubulin folding cofactor D), also known as β Tubulin cofactor D or SSD-1, is a 1,192 amino acid ubiquitously expressed centrosomal protein belonging to the TBCD family. Along with other cofactors, TBCD may participate in capturing and stabilizing β Tubulin intermediates in a quasi-native confirmation. TBCD has been implicated in modulating microtubule dynamics by capturing GTP-bound β Tubulin. Existing as five isoforms produced by alternative splicing events, TBCD contains three HEAT repeats and is down-regulated by shear stress.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Tbcd* (mouse) mapping to 11 E2.

RESEARCH USE

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

PRODUCT

TBCD 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 TBCD shRNA Plasmid (m): sc-154117-SH and TBCD shRNA (m) Lentiviral Particles: sc-154117-V as alternate gene silencing products.

For independent verification of TBCD (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-154117A, sc-154117B and sc-154117C.

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

TBCD siRNA (m) is recommended for the inhibition of TBCD 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 TBCD gene expression knockdown using RT-PCR Primer: TBCD (m)-PR: sc-154117-PR (20 μ l). 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.