SANTA CRUZ BIOTECHNOLOGY, INC.

CBLL1 siRNA (m): sc-142035

BACKGROUND

CBLL1 (casitas B-lineage lymphoma-transforming sequence-like protein 1), also known as HAKAI (meaning "destruction" in Japanese), or RNF188 (RING finger protein 188), is a 491 amino acid protein that contains one C_2H_2-type zinc finger and one RING-type zinc finger. CBLL1 is believed to function as an E3 ubiquitin-protein ligase that accepts a ubiquitin residue from an E2 ubiquitin-conjugating enzyme and immediately transfers that residue to a protein that is targeted for degradation. More specifically, upon activation of c-Src, CBLL1 interacts with and ubiquitinates tyrosine-phosphorylated E-cadherin, thereby targeting the E-cadherin complex for endocytosis and disrupting epithelial cell-cell contacts. Via its role as an E-cadherin regulator, CBLL1 participates in cell adhesion and may also be involved in the regulation of epithelial-mesenchymal transitions.

REFERENCES

1. Fujita, Y., Krause, G., Scheffner, M., Zechner, D., Leddy, H.E., Behrens, J., Sommer, T. and Birchmeier, W. 2002. Hakai, a c-Cbl-like protein, ubiquitinates and induces endocytosis of the E-cadherin complex. Nat. Cell Biol. 4: 222-231.
2. Pece, S. and Gutkind, J.S. 2002. E-cadherin and Hakai: signalling, remodeling or destruction? Nat. Cell Biol. 4: E72-E74.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606872. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Frame, M.C. 2004. Newest findings on the oldest oncogene; how activated Src does it. J. Cell Sci. 117: 989-998.
5. Carter, O., Bailey, G.S. and Dashwood, R.H. 2004. The dietary phytochemical chlorophyllin alters E-cadherin and β-catenin expression in human colon cancer cells. J. Nutr. 134: 3441S-3444S.

CHROMOSOMAL LOCATION

Genetic locus: Cbll1 (mouse) mapping to 12 A3.

PRODUCT

CBLL1 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 CBLL1 shRNA Plasmid (m): sc-142035-SH and CBLL1 shRNA (m) Lentiviral Particles: sc-142035-V as alternate gene silencing products.

For independent verification of CBLL1 (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-142035A, sc-142035B and sc-142035C.

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 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

CBLL1 siRNA (m) is recommended for the inhibition of CBLL1 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.

GENE EXPRESSION MONITORING

CBLL1 (3B12): sc-517157 is recommended as a control antibody for monitoring of CBLL1 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 CBLL1 gene expression knockdown using RT-PCR Primer: CBLL1 (m)-PR: sc-142035-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.