SANTA CRUZ BIOTECHNOLOGY, INC.

CBLL1 (3B12): sc-517157

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The Power to Question

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., et al. 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., et al. 2004. The dietary phytochemical chlorophyllin alters E-cadherin and β-catenin expression in human colon cancer cells. J. Nutr. 134: 3441S-3444S.
6. Heo, H.S., et al. 2005. Microarray profiling of genes differentially expressed during erythroid differentiation of murine erythroleukemia cells. Mol. Cells 20: 57-68.
7. Okoruwa, O.E., et al. 2008. Evolutionary insights into the unique electromotility motor of mammalian outer hair cells. Evol. Dev. 10: 300-315.

CHROMOSOMAL LOCATION

Genetic locus: CBLL1 (human) mapping to 7q22.3; Cbll1 (mouse) mapping to 12 A3.

SOURCE

CBLL1 (3B12) is a mouse monoclonal antibody raised against amino acids 1-100 representing partial length CBLL1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CBLL1 (3B12) is recommended for detection of CBLL1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CBLL1 siRNA (h): sc-89853, CBLL1 siRNA (m): sc-142035, CBLL1 shRNA Plasmid (h): sc-89853-SH, CBLL1 shRNA Plasmid (m): sc-142035-SH, CBLL1 shRNA (h) Lentiviral Particles: sc-89853-V and CBLL1 shRNA (m) Lentiviral Particles: sc-142035-V.

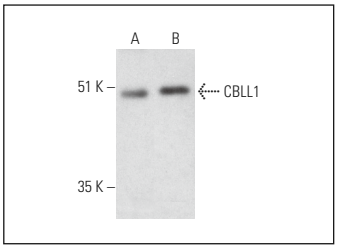
Molecular Weight of CBLL1: 55 kDa.

Positive Controls: mouse brain extract: sc-2253 or rat brain extract: sc-2392.

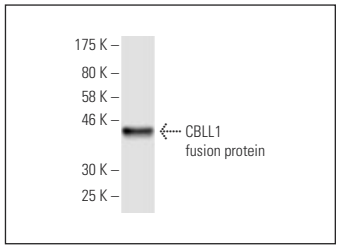
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CBLL1 (3B12): sc-517157. Western blot analysis of CBLL1 expression in mouse brain (**A**) and rat brain (**B**) tissue extracts.



CBLL1 (3B12): sc-517157. Western blot analysis of human recombinant CBLL1 fusion protein.

SELECT PRODUCT CITATIONS

1. Ye, Z., et al. 2021. GRB2 enforces homology-directed repair initiation by MRE11. Sci. Adv. 7: eabe9254.
2. Feng, S., et al. 2023. Inhibition of CARM1-mediated methylation of ACSL4 promotes ferroptosis in colorectal cancer. Adv. Sci. 10: e2303484.

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.