SANTA CRUZ BIOTECHNOLOGY, INC.

Cbl (A-9): sc-1651

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cbl (also designated the c-Cbl proto-oncogene, E3 ubiquitin-protein ligase CBL, Casitas B-lineage lymphoma proto-oncogene and RING finger protein 55) has been identified as the cellular homolog of the v-Cbl oncogene isolated from an NFS/N mouse that developed a pre-B cell lymphoma following infection with the replication-competent Cas Br-M murine leukemic virus. c-Cbl is expressed at relatively high levels in a wide range of hematopoietic tumor cell lines as well as in normal tissues such as thymus and testis. The c-Cbl gene product has been identified as a cytoplasmic protein with apparent DNA binding and dimerization domains characteristic of transcription factors. A single c-Cbl locus termed CBL2 has been mapped to human chromosome 11q23.3. This region of chromosome 11 is involved in translocations and deletions in a broad range of leukemias; c-Cbl has been found to be translocated from chromosome 11q23.3 in leukemias with either t(4;11) or t(11;14) abnormalities. Two proteins related to c-Cbl have been identified as Cbl-b (RING finger protein 56) and Cbl-3 (RING finger protein 57). Cbl-b has a proline-rich domain, a nuclear localization signal, a C3HC4 zinc finger and a putative leucine zipper. Cbl-b is expressed in normal and malignant mammary epithelial cells, various normal tissues and hematopoietic tissue and cell lines. Data suggests that Cbl-b encodes a protein that can interact with signal transduction proteins to regulate their function or be regulated by them.

CHROMOSOMAL LOCATION

Genetic locus: CBL (human) mapping to 11q23.3; Cbl (mouse) mapping to 9 A5.1.

SOURCE

Cbl (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 856-906 at the C-terminus of Cbl of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Cbl (A-9) is available conjugated to agarose (sc-1651 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-1651 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-1651 PE), fluorescein (sc-1651 FITC), Alexa Fluor® 488 (sc-1651 AF488), Alexa Fluor® 546 (sc-1651 AF546), Alexa Fluor® 594 (sc-1651 AF594) or Alexa Fluor® 647 (sc-1651 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-1651 AF680) or Alexa Fluor® 790 (sc-1651 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-1651 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Cbl (A-9) is recommended for detection of Cbl 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

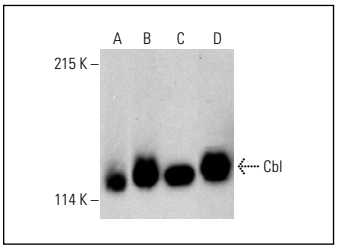
Cbl (A-9) is also recommended for detection of Cbl in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Cbl siRNA (h): sc-29242, Cbl siRNA (m): sc-29949, Cbl shRNA Plasmid (h): sc-29242-SH, Cbl shRNA Plasmid (m): sc-29949-SH, Cbl shRNA (h) Lentiviral Particles: sc-29242-V and Cbl shRNA (m) Lentiviral Particles: sc-29949-V.

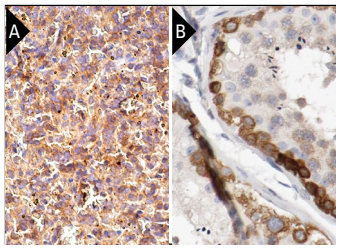
Molecular Weight of Cbl: 120 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, F9 cell lysate: sc-2245 or rat testis extract: sc-2400.

DATA



Cbl (A-9) HRP: sc-1651 HRP. Direct western blot analysis of Cbl expression in K-562 (**A**), WR19L (**B**) and F9 (**C**) whole cell lysates and rat testis tissue extract (**D**).



Cbl (A-9): sc-1651. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in red pulp (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in ductus seminiferus. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Sattler, M., et al. 1997. Steel factor induces tyrosine phosphorylation of CRKL and binding of CRKL to a complex containing c-Kit, phosphatidylinositol 3-kinase, and $p120^{CBL}$. J. Biol. Chem. 272: 10248-10253.
2. Dong, Q., et al. 2022. Anti-apoptotic HAX-1 suppresses cell apoptosis by promoting c-Abl kinase-involved ROS clearance. Cell Death Dis. 13: 298.
3. Zhong, W., et al. 2023. Adipose-specific deletion of the cation channel TRPM7 inhibits TAK1 kinase-dependent inflammation and obesity in male mice. Nat. Commun. 14: 491.

RESEARCH USE

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