

Cbl (G-12): sc-398282



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 11 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.

REFERENCES

1. Yunis, J.J. and Brunning, R.D. 1986. Prognostic significance of chromosomal abnormalities in acute leukemias and myelodysplastic syndromes. *Clin. Haematol.* 15: 597-620.
2. Langdon, W.Y., et al. 1989. v-Cbl, an oncogene from a dual-recombinant murine retrovirus that induces early B-lineage lymphomas. *Proc. Natl. Acad. Sci. USA* 86: 1168-1172.
3. Regnier, D.C., et al. 1989. Identification of two murine loci homologous to the v-Cbl oncogene. *J. Virol.* 63: 3678-3682.
4. Langdon, W.Y., et al. 1989. The c-Cbl proto-oncogene is preferentially expressed in thymus and testis tissue and encodes a nuclear protein. *J. Virol.* 63: 5420-5424.
5. Blake, T.J., et al. 1991. The sequences of the human and mouse c-Cbl proto-oncogenes show v-Cbl was generated by a large truncation encompassing a proline-rich domain and a leucine zipper-like motif. *Oncogene* 6: 653-657.

CHROMOSOMAL LOCATION

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

SOURCE

Cbl (G-12) is a mouse monoclonal antibody raised against amino acids 607-906 mapping at the C-terminus of Cbl of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Cbl (G-12) is recommended for detection of Cbl of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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.

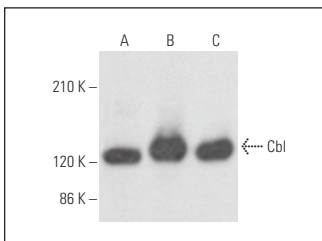
Molecular Weight of Cbl: 120 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, NIH/3T3 whole cell lysate: sc-2210 or A549 cell lysate: sc-2413.

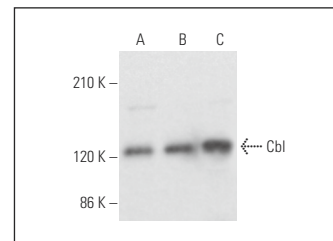
RECOMMENDED SUPPORT REAGENTS

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



Cbl (G-12): sc-398282. Western blot analysis of Cbl expression in A549 (A), WEHI-231 (B) and K-562 (C) whole cell lysates.



Cbl (G-12): sc-398282. Western blot analysis of Cbl expression in NIH/3T3 (A) and 3T3-L1 (B) whole cell lysates and rat testis tissue extract (C).

STORAGE

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

RESEARCH USE

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



See **Cbl (A-9): sc-1651** for Cbl antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.