

**Cbl Antibody**  
Catalog # ASC10472**Specification****Cbl Antibody - Product Information**

Application	WB, IF
Primary Accession	<a href="#">P22681</a>
Other Accession	<a href="#">P22681</a> , <a href="#">115855</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	Cbl antibody can be used for detection of cbl by Western blot at 0.5 - 2 µg/mL. Antibody can also be used for immunofluorescence starting at 20 µg/mL.

**Cbl Antibody - Additional Information**

Gene ID 867

**Other Names**

Cbl Antibody: CBL2, NSLL, C-CBL, RNF55, FRA11B, CBL2, E3 ubiquitin-protein ligase CBL, Casitas B-lineage lymphoma proto-oncogene, Cas-Br-M (murine) ecotropic retroviral transforming sequence

**Target/Specificity**

CBL;

**Reconstitution & Storage**

Cbl antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

Cbl Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Cbl Antibody - Protein Information**

Name CBL

Synonyms CBL2, RNF55

**Function**

E3 ubiquitin-protein ligase that acts as a negative regulator of many signaling pathways by mediating ubiquitination of cell surface receptors (PubMed: [10514377](http://www.uniprot.org/citations/10514377), PubMed: [11896602](http://www.uniprot.org/citations/11896602), PubMed: [14661060](http://www.uniprot.org/citations/14661060), PubMed: [14661060](http://www.uniprot.org/citations/14661060)).

href="http://www.uniprot.org/citations/14739300" target="\_blank">14739300</a>, PubMed:<a href="http://www.uniprot.org/citations/15190072" target="\_blank">15190072</a>, PubMed:<a href="http://www.uniprot.org/citations/17509076" target="\_blank">17509076</a>, PubMed:<a href="http://www.uniprot.org/citations/18374639" target="\_blank">18374639</a>, PubMed:<a href="http://www.uniprot.org/citations/19689429" target="\_blank">19689429</a>, PubMed:<a href="http://www.uniprot.org/citations/21596750" target="\_blank">21596750</a>, PubMed:<a href="http://www.uniprot.org/citations/28381567" target="\_blank">28381567</a>). Accepts ubiquitin from specific E2 ubiquitin-conjugating enzymes, and then transfers it to substrates promoting their degradation by the proteasome (PubMed:<a href="http://www.uniprot.org/citations/10514377" target="\_blank">10514377</a>, PubMed:<a href="http://www.uniprot.org/citations/14661060" target="\_blank">14661060</a>, PubMed:<a href="http://www.uniprot.org/citations/14739300" target="\_blank">14739300</a>, PubMed:<a href="http://www.uniprot.org/citations/17094949" target="\_blank">17094949</a>, PubMed:<a href="http://www.uniprot.org/citations/17509076" target="\_blank">17509076</a>, PubMed:<a href="http://www.uniprot.org/citations/17974561" target="\_blank">17974561</a>). Recognizes activated receptor tyrosine kinases, including KIT, FLT1, FGFR1, FGFR2, PDGFRA, PDGFRB, CSF1R, EPHA8 and KDR and mediates their ubiquitination to terminate signaling (PubMed:<a href="http://www.uniprot.org/citations/15190072" target="\_blank">15190072</a>, PubMed:<a href="http://www.uniprot.org/citations/18374639" target="\_blank">18374639</a>, PubMed:<a href="http://www.uniprot.org/citations/21596750" target="\_blank">21596750</a>). Recognizes membrane-bound HCK, SRC and other kinases of the SRC family and mediates their ubiquitination and degradation (PubMed:<a href="http://www.uniprot.org/citations/11896602" target="\_blank">11896602</a>). Ubiquitinates EGFR and SPRY2 (PubMed:<a href="http://www.uniprot.org/citations/17094949" target="\_blank">17094949</a>, PubMed:<a href="http://www.uniprot.org/citations/17974561" target="\_blank">17974561</a>). Ubiquitinates NECTIN1 following association between NECTIN1 and herpes simplex virus 1/HHV-1 envelope glycoprotein D, leading to NECTIN1 removal from cell surface (PubMed:<a href="http://www.uniprot.org/citations/28381567" target="\_blank">28381567</a>). Participates in signal transduction in hematopoietic cells. Plays an important role in the regulation of osteoblast differentiation and apoptosis (PubMed:<a href="http://www.uniprot.org/citations/15190072" target="\_blank">15190072</a>, PubMed:<a href="http://www.uniprot.org/citations/18374639" target="\_blank">18374639</a>). Essential for osteoclastic bone resorption (PubMed:<a href="http://www.uniprot.org/citations/14739300" target="\_blank">14739300</a>). The 'Tyr-731' phosphorylated form induces the activation and recruitment of phosphatidylinositol 3-kinase to the cell membrane in a signaling pathway that is critical for osteoclast function (PubMed:<a href="http://www.uniprot.org/citations/14739300" target="\_blank">14739300</a>). May be functionally coupled with the E2 ubiquitin-protein ligase UB2D3. In association with CBLB, required for proper feedback inhibition of ciliary platelet-derived growth factor receptor-alpha (PDGFRA) signaling pathway via ubiquitination and internalization of PDGFRA (By similarity).

### Cellular Location

Cytoplasm. Cell membrane. Cell projection, cilium. Golgi apparatus. Note=Colocalizes with FGFR2 in lipid rafts at the cell membrane

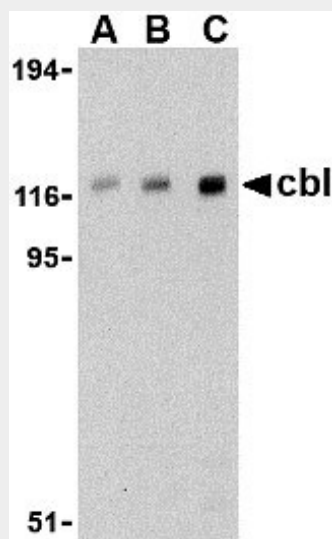
### Cbl Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

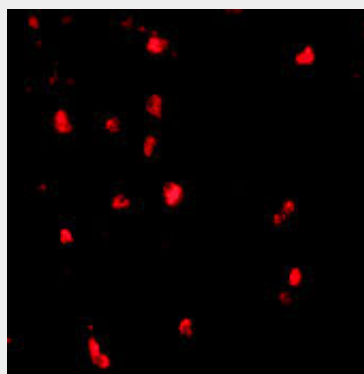
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

## Cbl Antibody - Images



Western blot analysis of cbl in Daudi cell lysate with cbl antibody at (A) 0.5, (B) 1, and (C) 2  $\mu\text{g/mL}$ .



Immunofluorescence of cbl in human lymph node tissue with cbl antibody at 20  $\mu\text{g/mL}$ .

## Cbl Antibody - Background

**Cbl Antibody:** The mammalian cbl family of ubiquitin ligases consists of three homologs known as cbl (also known as c-Cbl), Cbl-B, and Cbl-3 which share highly conserved a tyrosine-kinase-binding domain, linker and RING finger domain in their amino-terminal halves. Similar to other E3 ubiquitin ligases, Cbl catalyzes the transfer of ubiquitin from an E2 or Ubc (ubiquitin-conjugating) enzyme to the e-amino group of a lysine residue of the substrate protein. Cbl acts to negatively regulate many types of cell-surface receptors, including the Syk protein tyrosine kinase family. Cbl is thought to be involved in T- and B-cell signaling, in addition to thymus development. Of the three known homologs in the cbl family, cbl antibody reacts specifically with cbl. Multiple isoforms of cbl have been reported.

## Cbl Antibody - References

Thien CBF and Langdon WY. C-Cbl and Cbl-b ubiquitin ligases: substrate diversity and the negative regulation of signaling responses. *Biochem. J.* 2005; 391:153-66  
Weissman AM. Themes and variations on ubiquitylation. *Nat. Rev. Mol. Cell Biol.* 2001; 2:169-78.  
Swaminathan G and Tsygankov AY. The Cbl family of proteins: ring leaders in regulation of cell

signaling. J. Cell. Physiol. 2006; 209:21-43.