

**C-CBL Antibody**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO1600a**

**Specification**

**C-CBL Antibody - Product Information**

Application	E, WB, IHC, IF, FC
Primary Accession	<a href="#">P22681</a>
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	120kDa KDa

**Description**

The cbl oncogene was first identified as part of a transforming retrovirus which induces mouse pre-B and pro-B cell lymphomas. As an adaptor protein for receptor protein-tyrosine kinases, it positively regulates receptor protein-tyrosine kinase ubiquitination in a manner dependent upon its variant SH2 and RING finger domains. Ubiquitination of receptor protein-tyrosine kinases terminates signaling by marking active receptors for degradation.

**Immunogen**

Purified recombinant fragment of human C-CBL expressed in E. Coli.

**Formulation**

Ascitic fluid containing 0.03% sodium azide.

**C-CBL Antibody - Additional Information**

**Gene ID 867**

**Other Names**

E3 ubiquitin-protein ligase CBL, 6.3.2.-, Casitas B-lineage lymphoma proto-oncogene, Proto-oncogene c-Cbl, RING finger protein 55, Signal transduction protein CBL, CBL, CBL2, RNF55

**Dilution**

E~~~1/10000  
WB~~~1/500 - 1/2000  
IHC~~~1/200 - 1/1000  
IF~~~1/200 - 1/1000  
FC~~~1/200 - 1/400

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

C-CBL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## C-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:<a href="http://www.uniprot.org/citations/10514377" target="\_blank">10514377</a>, PubMed:<a href="http://www.uniprot.org/citations/11896602" target="\_blank">11896602</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/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

## C-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](#)

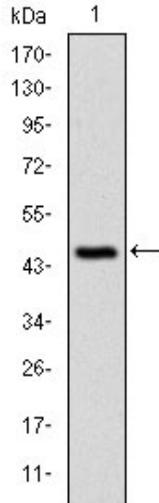
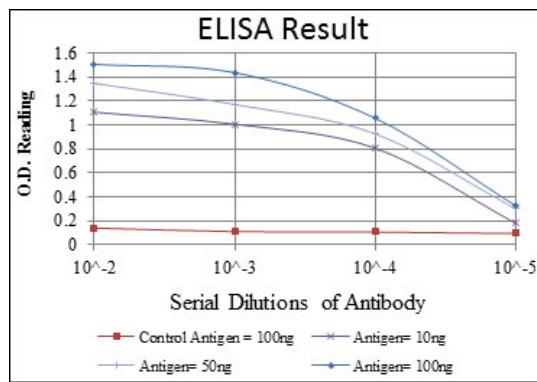


Figure 1: Western blot analysis using C-CBL mAb against human C-CBL (AA: 684-865) recombinant protein. (Expected MW is 44.9 kDa)

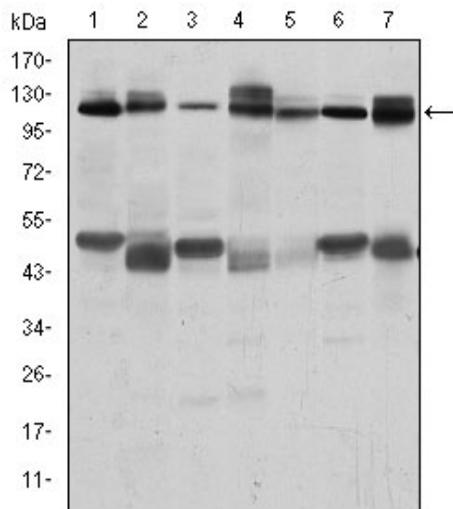


Figure 2: Western blot analysis using C-CBL mouse mAb against RAJI (1), RAW264.7 (2), K562 (3), SKBR-3 (4), 3T3-L1 (5), THP-1 (6) and PC-12 (7) cell lysate.

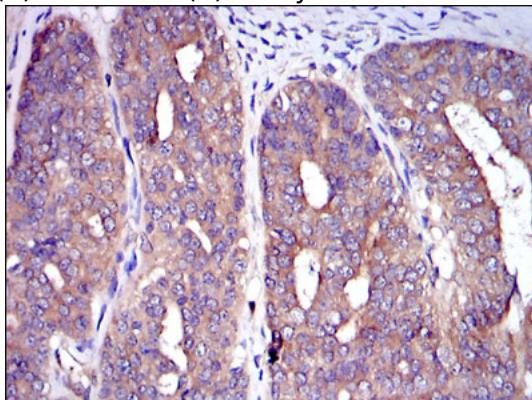


Figure 3: Immunohistochemical analysis of paraffin-embedded ovarian cancer tissues using C-CBL mouse mAb with DAB staining.

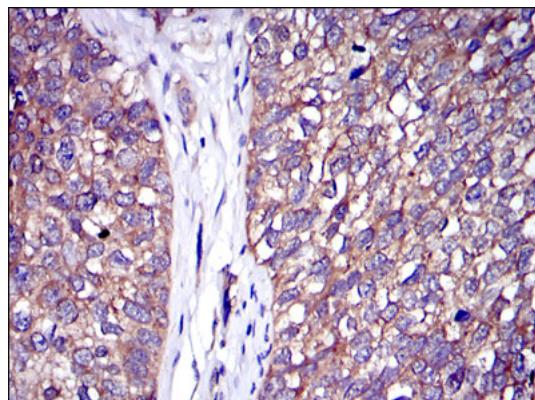


Figure 4: Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using C-CBL mouse mAb with DAB staining.

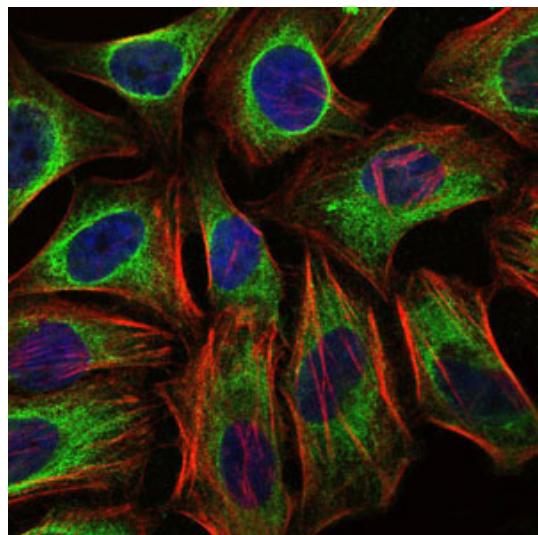


Figure 5: Immunofluorescence analysis of HeLa cells using C-CBL mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

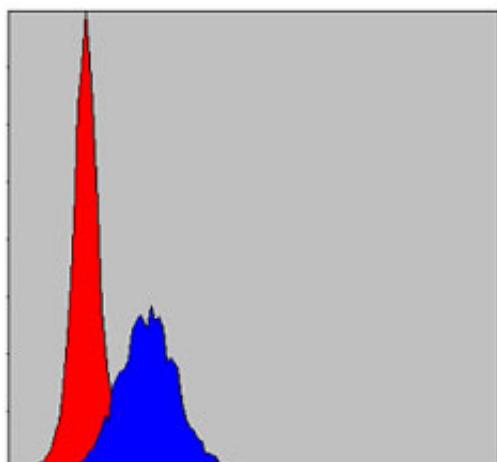


Figure 6: Flow cytometric analysis of MCF-7 cells using C-CBL mouse mAb (blue) and negative control (red).

#### C-CBL Antibody - References

1. Blood. 2009 Aug 27;114(9):1859-63.
2. Cell Res. 2009 Aug;19(8):950-61.
3. Nature. 2009 Aug 13;460(7257):904-8.