Datasheet for ABIN967577

# anti-CBL antibody (pTyr774)

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## Overview

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|---|---|
| Quantity: | 0.1 mg |
| Target: | CBL |
| Binding Specificity: | pTyr774 |
| Reactivity: | Human |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This CBL antibody is un-conjugated |
| Application: | Western Blotting (WB), Immunohistochemistry (Formalin-fixed Sections) (IHC (f)) |

## Product Details

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| Brand: | BD Pharmingen™ |
| Immunogen: | Phosphorylated Human c-Cbl Peptide |
| Clone: | 29-c |
| Isotype: | IgG1 kappa |
| Characteristics: | 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.<br>2. Please refer to us for technical protocols.<br>3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. |
| Purification: | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |

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## Target Details

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| Target: | CBL |
| Alternative Name: | c-Cbl (CBL Products) |
| Background: | Cbl (Casitas B-lineage lymphoma) was identified in the genome of a transforming retrovirus from a mouse pre-B lymphoma. The cellular gene product c-Cbl is one of numerous Cbl-related proteins found in vertebrate and invertebrate organisms. It is an 120-kDa adapter protein that contains multiple functional domains, including a RING finger motif, a tyrosine kinase-binding (TKB) domain, and a proline-rich region. The TKB domain directly interacts with specific auto-phosphorylation sites in activated protein-tyrosine kinases (PTK). Through the RING finger motif, c-Cbl recruits and activates an E2 ubiquitin-conjugating enzyme, thus targeting the activated PTK for protein degradation. The proline-rich region contains SH3 domain-binding and 14-3-3 protein-binding motifs. c-Cbl is also phosphorylated at tyrosines 700, 731, and 774 (Y774) by Syk- and Src-family kinases after the stimulation of some integrins and a wide variety of receptors for antigens, immunoglobulins, growth factors, cytokines, and hormones. In turn, the phosphorylated Y774 site interacts with the SH2 domain of the CRK adapter protein. The c-Cbl adapter protein is expressed in the cytoplasm in all tissues, with especially high levels of expression in hematopoietic cells. Through its many functional sites, c-Cbl plays key roles in the positive and negative regulation of vital cell functions, including T Cell Receptor-mediated cellular immune responses. The 29/c-Cbl monoclonal antibody recognizes the Y774-phosphorylated form of human c-Cbl. |
| Pathways: | TCR Signaling, Interferon-gamma Pathway, EGFR Signaling Pathway, EGFR Downregulation, VEGFR1 Specific Signals |

## Application Details

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| Comment: | Related Products: ABIN967389, ABIN968537, ABIN968656 |
| Restrictions: | For Research Use only |

## Handling

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|---|---|
| Format: | Liquid |
| Concentration: | 0.5 mg/mL |
| Buffer: | Aqueous buffered solution containing ≤0.09 % sodium azide. |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which |

## Handling

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| | should be handled by trained staff only. |
| Storage: | 4 °C |
| Storage Comment: | Store undiluted at 4°C. |

## Publications

| | |
|---|---|
| Product cited in: | Thien, Langdon: "Cbl: many adaptations to regulate protein tyrosine kinases." in: **Nature reviews. Molecular cell biology**, Vol. 2, Issue 4, pp. 294-307, (2001) (PubMed).<br><br>Tsygankov, Teckchandani, Feshchenko, Swaminathan: "Beyond the RING: CBL proteins as multivalent adapters." in: **Oncogene**, Vol. 20, Issue 44, pp. 6382-402, (2001) (PubMed). |

## Images

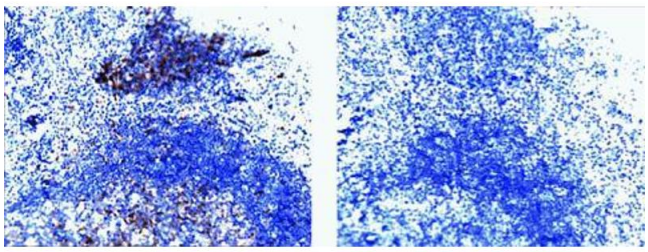

**Image 1.** c-Cbl (pY774) staining on tonsil. Fresh human tonsil was incubated in 5 mM Pervanadate solution for 2 hours, then fixed in formalin and processed. Following antigen retrieval with Retrievagen A buffer, the sections were either left untreated (left panel) or treated with a phosphatase to eliminate all phosphorylation (right panel). The tissue sections were stained with purified mouse anti-c-Cbl (pY774) with Hematoxylin counterstaining. Original magnification: 20X.


**Western Blotting**

**Image 2.** Western blot analysis of c-Cbl (pY774) in human T leukemia. Lysates from control (ABIN968537, left panel) and Pervanadate-treated (ABIN968656, right panel) Jurkat cells were probed with purified mouse anti-c-Cbl (pY774) monoclonal antibody at concentrations of 1.0, 0.5, and 0.25 myg/ml (Lanes 1, 2, and 3, respectively). c-Cbl (pY774) is identified as a band of 120 kDa in the treated cells.