

Product datasheet for **TA327228**

CBLB Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:500-1:2000
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Recombinant protein of human CBLB
Formulation:	Store at -20C or -80C. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3
Concentration:	lot specific
Purification:	Affinity purification
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	Cbl proto-oncogene B
Database Link:	NP_733762 Entrez Gene 171136 Rat Entrez Gene 208650 Mouse Entrez Gene 868 Human Q13191



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Background:

The Casitas B lineage lymphoma (Cbl) proteins (in mammals these are c-Cbl, Cbl-b, and Cbl-c) are a family of single subunit RING finger protein-ubiquitin E3 ligases that contain multiple protein interaction motifs. All Cbl proteins have a highly conserved N-terminal tyrosine kinase-binding (TKB) domain that mediates interactions between Cbl proteins and phosphorylated tyrosine residues on Cbl substrates. C-terminal to the RING finger, Cbl proteins have proline-rich domains that mediate interactions with SH3 domain-containing proteins. Phosphorylated tyrosine residues mediate interactions with SH2 domain-containing proteins such as the p85 subunit of PI3K. These protein-protein interaction motifs allow Cbl family proteins to function as adaptor proteins. This adaptor function contributes to the E3-dependent activities of Cbl proteins by targeting specific substrates for ubiquitination and degradation. The adaptor function also contributes to non-E3-dependent activities, such as the recruitment of proteins involved in receptor tyrosine kinase internalization, localization of Cbl proteins to specific subcellular compartments, and activation of discrete signaling pathways. Cbl-b is an E3 ubiquitin ligase with a domain organization nearly identical to that of c-Cbl. The role of Cbl-b in hematopoietic cell physiology is well documented. Cbl-b expression is important for the downregulation of TCR expression during antigen recognition. Cbl-b also acts as a potent negative regulator of the CD28 signaling cascade to Vav and Rac1 through its ability to ubiquitinate the p85 regulatory subunit of PI3K. As a critical regulator of clonal anergy in T lymphocytes, Cbl-b mRNA and protein are upregulated in T cells following calcium mobilization and calcineurin activation. Cbl-b-deficient T cells are resistant to anergy induction. The molecular events governing this phenotype are thought to be linked to defects in the ubiquitination of PLC γ 1 and PKC ζ since the degradation of these signaling molecules, which occurs following restimulation of wild-type anergic T cells, fails to occur in Cbl-b-deficient T cells.

Synonyms:

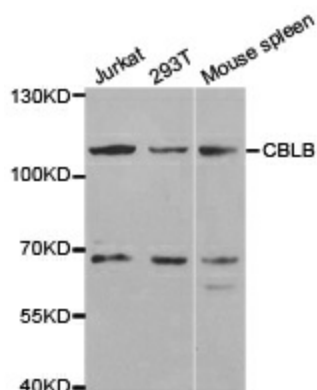
Cbl-b; Nbla00127; RNF56

Protein Families:

Druggable Genome

Protein Pathways:

Chronic myeloid leukemia, Endocytosis, ErbB signaling pathway, Insulin signaling pathway, Jak-STAT signaling pathway, Pathways in cancer, T cell receptor signaling pathway, Ubiquitin mediated proteolysis

Product images:

Western blot analysis of extracts of various cell lines, using CBLB antibody.

