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Product datasheet for TA327228S

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 RatEntrez Gene 208650 MouseEntrez Gene 868 Human Q13191

View online »

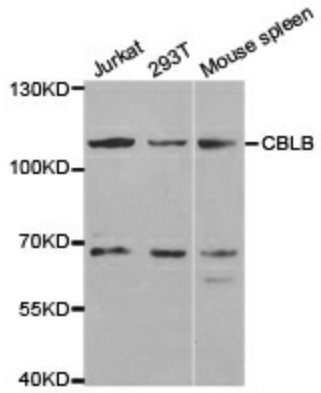
Background: The Casitas B lineage lymphoma (Cbl) proteins (in mammals these are c-Cbl, Cbl-b, and Cbl-c) are a family of single subunit RING finger protein-ubiquitin E3 ligases that contain multiple protein interaction motifs. All Cbl proteins have a highly conserved N-terminal tyrosine kinase-binding (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?1 and PKC? 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.