

Recombinant Human CBL Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50113

Size: 10ug, 100ug

Protein Name: E3 ubiquitin-protein ligase CBL (EC 2.3.2.27) (Casitas B-lineage lymphoma proto-oncogene) (Proto-oncogene c-Cbl) (RING finger protein 55) (RING-type E3 ubiquitin transferase CBL) (Signal transduction protein CBL)

Synonym: CBL, CBL2, RNF55

UniProt ID: P22681

UniProt Link: www.uniprot.org/uniprotkb/P22681/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 906 AA

Molecular Weight: 100 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MAGNVKKSSGAGGGSGSGSGSGGLIGLMKDAFQPHHHHHHLSPHPPGTVDKMMVEKWCWKLMDKVVRLCQNPKLALKNSPPYILDLLPDTYQHLRTILSRYEGKMETLGENEYFRVFMENLMKKTQTISLFKEGKERMYEENSQPRRNLTKLSLIFSHMLAELKGIFPSGLFQGDTRITKADAAEFWRKAFGEKTI
VPWKSFRQALHEVHPISGLEAMALKSTIDLTCDYISVFEDIFTRLFQPWSSLLRNWNSLAVTHPGYMAFLT
YDEVKARLQKFIHKPGSYIFRLSCTRLGQWAIGYVTADGNILQTIPHNKPLFQALIDGFREGFYLPDGRN
QNPDLTGLCEPTPQDHIKVTQEYELYCEMGSTFQLCKICAENDKDVKIEPCGHLMCTSCLTSWQESEGG
QCPFCRCEIKGTEPIVDPDFDPRGSGSLLRQGAEGAPSPNYDDDDDERADDTLFMMKELAGAKVERPP
SPFSMAPQASLPVPPRLDLLPQRVCVPSSASALGTASKAASGSLHKDKPLPVPPTLRDLPPPPPPDRP
YSVGAESRPQRRPLPCTPGDCPSRDKLPVPSSRLGDSWLPRPIPKVPVSAPSSSDPWTGRELTNRHSLP
FSLPSQMEPRPDVPRLGSTFSLDTSMSMNSSPLVGPECDHPKIKPSSSANAIYSLAARPLVPKLP
PGEQCEGEEDTEYMTSSRPLRPLDTSQSSSRACDCDQQIDSCTYEA MYNIQSQA
PSITESSTFGEGNLAHAHANTGPEESENEDDGYDVPKPPVPAVLARRTLSDISNASSSGWLSLDG
DPTTNVTEGSQVPERPPKPFPRRINSERKAGSCQQGSGPAASAATASPQLSSEIENLMSQGYSYQ
DIQKALVIAQNNIEMAKNILREFVSISSPAHVAT

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant E3 ubiquitin-protein ligase CBL (EC 2.3.2.27) (Casitas B-lineage lymphoma proto-oncogene) (Proto-oncogene c-Cbl) (RING finger protein 55) (RING-type E3 ubiquitin transferase CBL) (Signal transduction protein CBL) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: E3 ubiquitin-protein ligase that acts as a negative regulator of many signaling pathways by mediating ubiquitination of cell surface receptors (PubMed:10514377, PubMed:11896602, PubMed:14661060, PubMed:14739300, PubMed:15190072, PubMed:17509076, PubMed:18374639, PubMed:19689429, PubMed:21596750, PubMed:28381567, PubMed:40101708). Accepts ubiquitin from specific E2 ubiquitin-conjugating enzymes, and then transfers it to substrates promoting their degradation by the proteasome (PubMed:10514377, PubMed:14661060, PubMed:14739300, PubMed:17094949, PubMed:17509076, PubMed:17974561). Recognizes activated receptor tyrosine kinases, including KIT, FLT1, FGFR1, FGFR2, PDGFRA, PDGFRB, CSF1R, EPHA8 and KDR and mediates their ubiquitination to terminate signaling (PubMed:15190072, PubMed:18374639, PubMed:21596750). Recognizes membrane-bound HCK, SRC and other kinases of the SRC family and mediates their ubiquitination and degradation (PubMed:11896602). Ubiquitinates EGFR and SPRY2 (PubMed:17094949, PubMed:17974561). Involved in LAG3-mediated inhibition of TCR signaling: following ligand-binding to LAG3, catalyzes 'Lys-63'-linked ubiquitination of LAG3, unleashing the LAG3 C-terminus from the membrane, and initiating a signaling that prevents TCR activation (PubMed:40101708). Ubiquitinates NECTIN1 following association between NECTIN1 and herpes simplex virus 1/HHV-1 envelope glycoprotein D, leading to NECTIN1 removal from cell surface (PubMed:28381567). Participates in signal transduction in hematopoietic cells. Plays an important role in the regulation of osteoblast differentiation and apoptosis (PubMed:15190072, PubMed:18374639). Essential for osteoclastic bone resorption (PubMed:14739300). 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:14739300). 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).

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

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial

manufacturing.