Cbl-b Core (TKB + RING)

Cat. # UB308

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Background

Cbl-b is an E3 ubiquitin ligase that regulates various signaling molecules in the cell, including those involved in T-cell activation and tolerance, through multiple mechanisms. The mammalian Cbl protein family comprises c-Cbl, Cbl-b, and Cbl-3. All three members share a highly homologous tyrosine kinase-binding (TKB) domain. This domain is followed by a conserved helical linker (L) domain and a RING (Really Interesting New Gene) finger (RF) domain, which mediates interaction with ubiquitin-conjugating enzymes (E2s). In contrast, the C-terminal regions of Cbl proteins are less conserved.

Alternate Names

Cbl Proto-Oncogene B, RING Finger Protein 56 (RNF56), Casitas B-Lineage Lymphoma Proto-Oncogene B, RING-Type E3 Ubiquitin Transferase CBL-B, E3 Ubiquitin-Protein Ligase CBL-B, Signal Transduction Protein CBL-B, Cas-Br-M (Murine) Ectropic Retroviral Transforming Sequence B 2

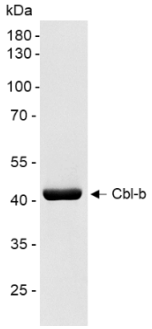
Application(s)

Ubiquitin ligation reactions

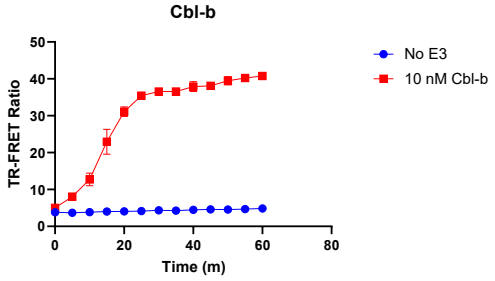
Product Specifications

Affinity tag	His6 + HA
Purity	> 95% by SDS-PAGE
Molecular Weight	48 kDa
Quantity	25 µg
Species	Human
Expression System	E. coli
Physical State	Liquid
Buffer	45 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 10% glycerol, 3 mM DTT
Activity	A typical enzyme concentration of 1-100 nM is used for *in vitro* conjugation, depending on experimental conditions
Storage	Store at -80°C. Avoid repeated freeze/thaw cycles

Product QC



SDS-Page Analysis of purified Cbl-b. Two µg of the protein was loaded on a 10-20% SDS-PAGE gel and stained with Coomassie brilliant blue.



Activity Assay of Cbl-b. 10 nM Cbl-b was tested in a TR-FRET assay showing robust E3 ligase activity.

References

1. Augustin, RC., et al., J Immunother Cancer, 2023. 11(2):e006007.
2. Kumar, J., et al., J Immunother Cancer, 2021. 9(1):e001688.