Phospho-c-Cbl (Tyr700) (E1) rabbit mAb

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Catalog: #2321 **Store at:** -20ºC

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
Flow Cytometry	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

Format: Unconjugated

Cross Reactivity: Predicted to work with mouse, rat and other homologues.

Formulation: 1X PBS, 0.02% NaN3, 50% Glycerol, 0.1% BSA

Preparation: Protein A+G

Reactivity: Human,Mouse,Rat

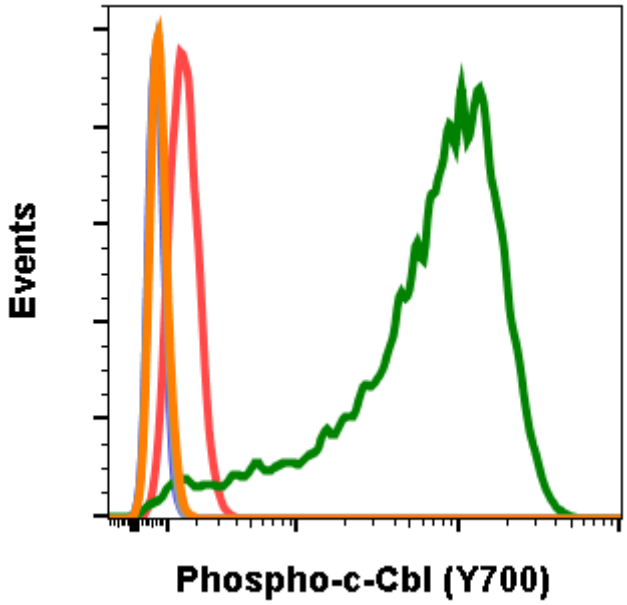
Recommended Usage: 1µg/mL – 0.001µg/mL. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

Immunogen: A synthetic phospho-peptide corresponding to residues surrounding Tyr700 of human phospho c-Cbl

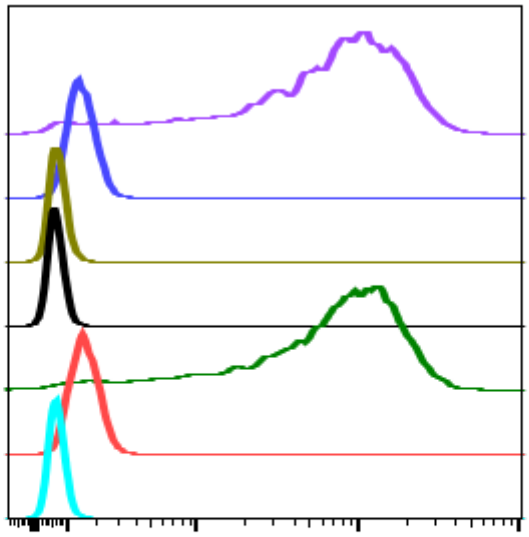
Description: The c-Cbl (Casitas B-lineage Lymphoma) proto-oncogene is a ubiquitously expressed cytoplasmic adaptor protein that contains multiple functional domains, including an amino-terminal tyrosine kinase-binding (TKB) domain, a RING finger motif, and a proline-rich region. The TKB recognizes phosphorylated tyrosines on activated receptor tyrosine kinases (RTKs) and on other nonreceptor tyrosine kinases, while the RING finger motif recruits ubiquitin-conjugating enzymes. These two domains are primarily responsible for the ubiquitin ligase activity of c-Cbl and downregulation of RTKs (1). The proline-rich region contains 14-3-3 protein-binding and SH3 domain-binding motifs. c-Cbl is phosphorylated at Y700, Y731, and Y774 by Syk- and Src-family kinases after the stimulation of some integrins and a wide variety of receptors for immunoglobulins, antigens, hormones, growth factors, and cytokines. Phosphorylated Y774 interacts with the SH2 domain of Crk (1,2). The c-Cbl adapter protein is expressed in the cytoplasm in all tissues, with especially high levels of expression in hematopoietic cells (3,4). 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. In human cancer tissues, c-Cbl is frequently tyrosine-phosphorylated in a tumor-specific manner (5).

References:

1. Christine, B.F. et al. (2001) Nat. Rev. Mol. Cell Biol. 2: 294-307.
2. Feshchenko, E.A. et al. (1998) J. Biol. Chem. 273: 8323-8331.
3. Blake, T.J. et al. (1991) Oncogene. 6: 653-657.
4. Thien, C.B. and Langdon, W.Y. (1998) Immunol. Cell Biol. 76: 473-482.
5. Kamei, T. et al. (2000) Int. J. Oncol. 17: 335-339.

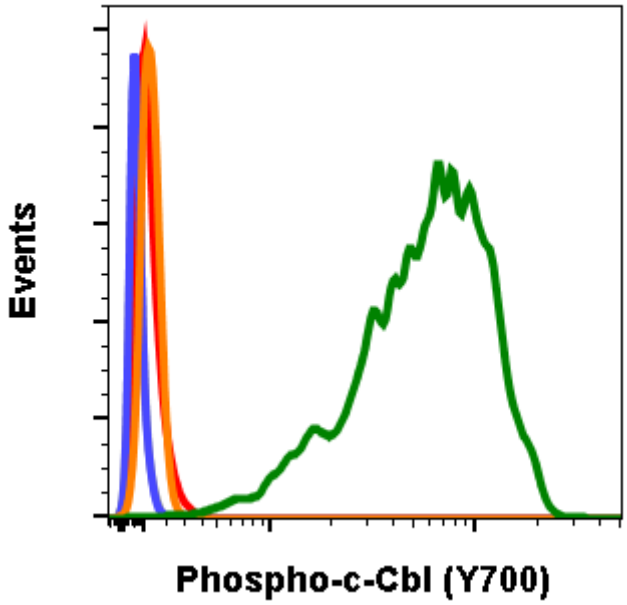


Flow cytometric analysis of C6 cells secondary antibody only negative control (blue) or treated with imatinib (grey) or with pervanadate (orange) using 0.1 µg/mL isotype control Cat. #2141 or imatinib (red) or pervanadate (green) using Phospho-c-Cbl (Tyr700) antibody CblY700-E1 at 0.1 µg/mL. Cat. #2321.

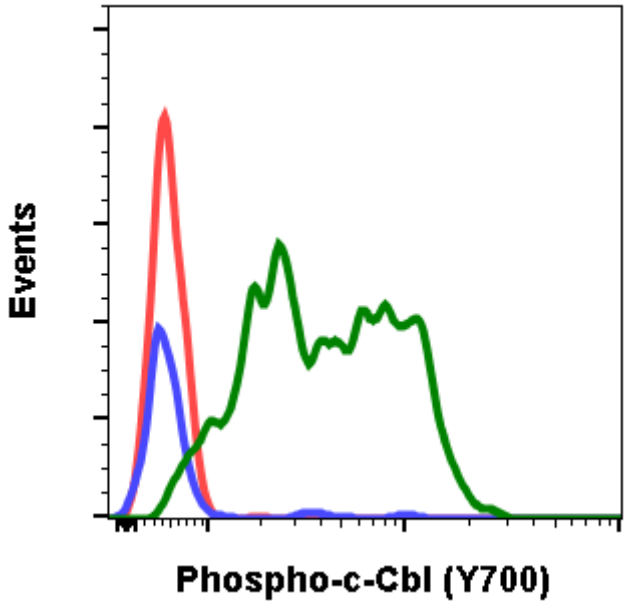


	IgG	Treatment	Peptide Block	Median : BL1-A
	E1	Pv	Non-phos.	76759
	E1	Imat	Non-phos.	1399
	E1	Pv	Phospho	652
	E1	Imat	Phospho	587
	E1	Pv	-	78955
	E1	Imat	-	1518
	2'only	Imat	-	623

Peptide blocking flow cytometric analysis of C6 cells, secondary antibody only negative control (light blue) or treated with imatinib (red) or with pervanadate (green) or imatinib and blocked with phospho-peptide (black) or pervanadate and blocked with phospho peptide (gold) or imatinib and blocked with non-phospho peptide (dark blue) or pervanadate and blocked with non-phospho peptide (purple) using Phospho-c-Cbl (Tyr700) antibody CblY700-E1 at 0.1 µg/mL. Cat. #2321.



Flow cytometric analysis of HeLa cells, secondary antibody only negative control (blue) or treated with imatinib (grey) or with pervanadate (orange) using 0.1 µg/mL isotype control Cat. #2141, or imatinib (red) or pervanadate (green) using Phospho-c-Cbl (Tyr700) antibody CblY700-E1 at 0.1 µg/mL. Cat. #2321.



Flow cytometric analysis of 3T3 cells, secondary antibody only negative control (blue) or treated with imatinib (red) or pervanadate (green) using Phospho-c-Cbl (Tyr700) antibody CblY700-E1 at 0.01 µg/mL. Cat. #2321.