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

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#2323

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

Applications	Detection	Clonality	Isotype
Flow Cytometry	N/A	Monoclonal	Rabbit IgGk

Format: FITC

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

Formulation: 1X PBS, 0.09% NaN3, 0.2% BSA

Preparation: Protein A+G

Reactivity: Human,Mouse,Rat

Recommended Usage: For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells or 5 µL per 100 µL of staining volume. 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.

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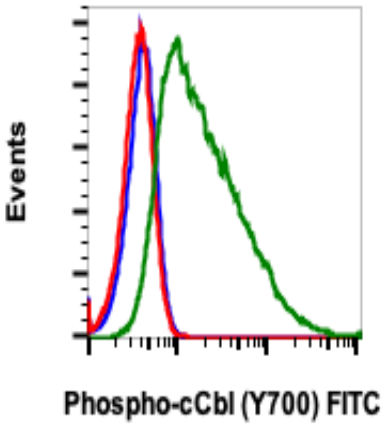

Flow cytometric analysis of C6 cells cell treated with imatinib and unstained as negative control (blue) or treated with imatinib (red) or with pervanadate (green) and stained using Phospho-c-Cbl (Tyr700) FITC conjugated antibody CblY700-E1. Cat. #2323.

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