

# Phospho-MCL-1 (Ser159) Monoclonal Antibody (RBCERNR), PE, eBioscience™

Product Details	
Size	100 Tests
Species Reactivity	Human, Mouse
Host/Isotype	Mouse / IgG2b, kappa
Recommended Isotype Control	Mouse IgG2b kappa Isotype Control (eBMG2b), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	RBCERNR
Conjugate	PE
Excitation/Emission Max	565/576 nm
Form	Liquid
Concentration	5 µL/Test
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.2% BSA
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2572685

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	5 µL (0.125 µg)/test	-

## Product Specific Information

**Description:** This RBCERNR monoclonal antibody recognizes human and mouse myeloid cell leukemia sequence 1 (Mcl-1) when phosphorylated on serine 159 (S159). Mcl-1 is an anti-apoptotic protein that is a member of the Bcl-2 family of proteins important for regulation of cell survival/apoptosis. Mcl-1 is primarily localized to the outer membrane of mitochondria where it prevents cytochrome c release via dimerization with other Bcl-2 family members such as Bim. PI3K activation of AKT results in the phosphorylation of GSK3 beta at serine 9 (S9) resulting in destabilization and degradation of GSK3 beta. Loss of GSK3 beta prevents phosphorylation of Mcl-1 on S159 and its subsequent ubiquitination and degradation. Mice conditionally lacking Mcl-1 in lymphocytes showed that Mcl-1 is essential during early lymphoid development and for the maintenance of mature lymphocytes.

**Applications Reported:** This RBCERNR antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

**Applications Tested:** This RBCERNR antibody has been pre-titrated and tested by intracellular staining followed by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.125 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test.

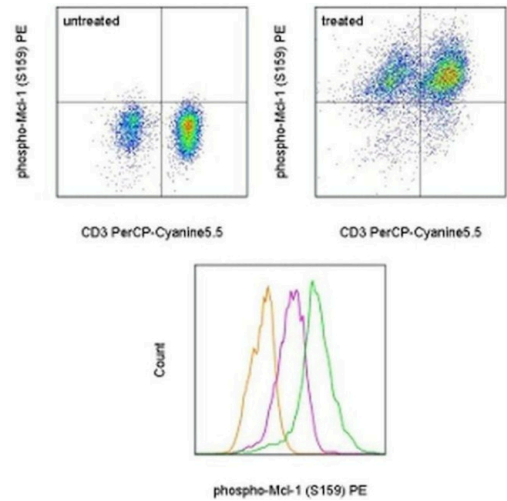
**Staining Protocol:** Protocol A and Protocol C are recommended for this monoclonal antibody. Use of Protocol A: Two-step protocol: intracellular (cytoplasmic) proteins allows for the greatest flexibility for detection of surface and intracellular (cytoplasmic) proteins. Protocol C: Two-step protocol: Fixation/Methanol allows for the greatest discrimination of phospho-specific signaling between unstimulated and stimulated samples, but with limitations on the ability to stain specific surface

proteins (refer to "Clone Performance Following Fixation/Permeabilization" located in the Best Protocols Section under the Resources tab online). All Protocols can be found in the Flow Cytometry Protocols: "Staining Intracellular Antigens for Flow Cytometry Protocol" located in the Best Protocols Section under the Resources tab online.

Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For Phospho-MCL-1 (Ser159) Monoclonal Antibody (RBCERNR), PE, eBioscience™



**Phospho-MCL-1 (Ser159) Antibody (12-9038-42) in Flow**  
TOP: Intracellular staining of normal human peripheral blood cells that were untreated (left) or treated with Calyculin A for 4 hours (right) with Anti-Human CD3 PerCP-Cyanine5-5 (Product # 45-0036-42) and phospho-Mcl-1 (S159) PE. Plots show cells in the lymphocyte gate. BOTTOM: Normal human peripheral blood cells were unstimulated (orange histogram), were stimulated with Anti-Human CD3 and CD28 Functional Grade Purifieds (Product # 16-0037-81 and Product # 16-0289-81) in the presence of the proteasome inhibitor MG-132 (purple histogram), or were treated with Calyculin A (green histogram). The cells were then intracellularly stained with Anti-Human CD3 PerCP-Cyanine5-5 (Product # 45-0036-42) and Anti-Human/Mouse phospho-Mcl-1 (S159) PE using the Intracellular Fixation & Permeabilization Buffer Set (Product # 88-8824-00) and protocol. CD3+ cells in the lymphocyte gate were used for analysis.

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