

**DESCRIPTION**

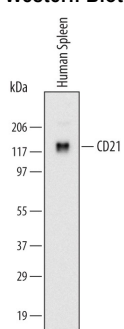
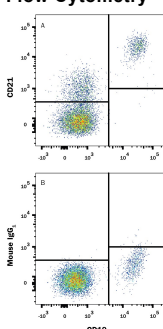
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CD21 in direct ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 544408
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human CD21 lle21-Arg971 Accession # P20023
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	See Below
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>CyTOF-ready</b>	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

**DATA**

<p><b>Western Blot</b></p>  <p><b>Detection of Human CD21 by Western Blot.</b> Western blot shows lysates of human spleen tissue. PVDF Membrane was probed with 2 µg/mL of Mouse Anti-Human CD21 Monoclonal Antibody (Catalog # MAB4909) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for CD21 at approximately 145 kDa (as indicated). This experiment was conducted under non-reducing conditions and using <i>Immunoblot Buffer Group 1</i>. This antibody is recommended to be used under non-reducing conditions only.</p>	<p><b>Flow Cytometry</b></p>  <p><b>Detection of CD21 in Human PBMCs by Flow Cytometry.</b> Human peripheral blood mononuclear cells (PBMCs) were stained with Mouse Anti-Human CD19 PE-conjugated Monoclonal Antibody (Catalog # FAB4867P) and either (A) Mouse Anti-Human CD21 Monoclonal Antibody (Catalog # MAB4909) or (B) Mouse IgG<sub>1</sub> Isotype Control (Catalog # MAB002) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B).</p>
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**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

CD21 (also called EBV receptor or CR2) is a 145 kDa member of the RCA (receptors of complement activation) family of proteins. It is expressed on T cells, B cells, and follicular dendritic cells. On the B cell surface, it combines with the BCR and CD19 to form a B cell activating complex. Mature human CD21 is 1013 amino acids (aa) in length. It is a type I transmembrane (TM) protein that contains a 951 aa extracellular domain (ECD) (aa 21-971) and a short 34 aa cytoplasmic tail. The ECD exhibits fifteen 60 aa SUSHI repeats. Soluble CD21 can be generated by cleavage near the TM domain. One potential splice variant shows a deletion of aa 847-908, while another shows an insertion of 59 aa after Lys659. The ECD of human CD21 shares 71% aa identity with mouse CD21 ECD.