

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CD47. Stains human CD47 transfectants but not irrelevant transfectants.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 472603
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human CD47 Gln19-Pro139 Accession # Q08722
<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 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>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.	
<b>Blockade of Receptor-ligand Interaction</b>	In a functional flow cytometry test, 2.5 µg/mL of Mouse anti-Human CD47 Antibody (Catalog #MAB4670) will block the binding of 100 ng/mL Recombinant Human SIRPα/CD172a Fc Chimera (Catalog # 4546-SA) HEK293 human embryonic kidney cell line transfected with recombinant human CD47.	

**DATA**

**Flow Cytometry**

**Detection of CD47 in Human Lymphocytes by Flow Cytometry.** Human peripheral blood lymphocytes were stained with Mouse Anti-Human CD47 Monoclonal Antibody (Catalog # MAB4670, filled histogram) or isotype control antibody (Catalog # MAB002, open histogram), followed by Phycoerythrin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). View our protocol for [Staining Membrane-associated Proteins](#).

**Blockade of Receptor-ligand Interaction**

**SIRPα/CD172a Binding to CD47-transfected HEK293 Human Cell Line is Blocked by Human CD47 Antibody.** In a functional flow cytometry test, biotinylated recombinant Human SIRPα/CD172a (100 ng/mL, Catalog # 4546-SA) binds to Human CD47-transfected HEK293 human embryonic kidney cell line (black dotted line). Binding is completely blocked (orange histogram) by 2.5 µg/mL of Mouse Anti-Human CD47 Monoclonal Antibody (Catalog # MAB4670). Mouse IgG<sub>1</sub> isotype (Catalog # MAB002) at 2.5 µg/mL was used as a control (blue line). Cells were stained with Streptavidin-APC (Catalog # F0050).

**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**

CD47, also known as integrin-associated protein, is a ubiquitous 50 kDa multipass transmembrane protein with a single IgV-like domain at its N-terminus. CD47 binding to SIRPα prevents the phagocytic engulfment of viable cells. Thrombospondin interaction with CD47 on T cells reduces T cell proliferation and inflammatory reactions. Alternate splicing generates isoforms with truncated cytoplasmic domains. Within the N-terminal ECD, human CD47 shares 63% aa sequence identity with mouse and rat CD47.