DESCRIPTION
Species Reactivity  Human
Specificity  Detects human CD47. Stains human CD47 transfectants but not irrelevant transfectants.
Source  Monoclonal Mouse IgG, Clone # 472603
Purification  Protein A or G purified from hybridoma culture supernatant
Immunogen  Mouse myeloma cell line NS0-derived recombinant human CD47
Accession #  Q08722
Formulation  Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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.

Recommended Concentration  Sample

Flow Cytometry  0.25 μg/10^6 cells  See Below
CyTOF-ready  Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.

Blockade of Receptor-ligand Interaction  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 IgG1 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
Reconstitution  Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping  The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage  Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.