

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD47. Stains human CD47 transfectants but not irrelevant transfectants.
Source	Monoclonal Mouse IgG ₁ Clone # 472603
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD47 Gln19-Pro139 Accession # Q08722
Formulation	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.

	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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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.