

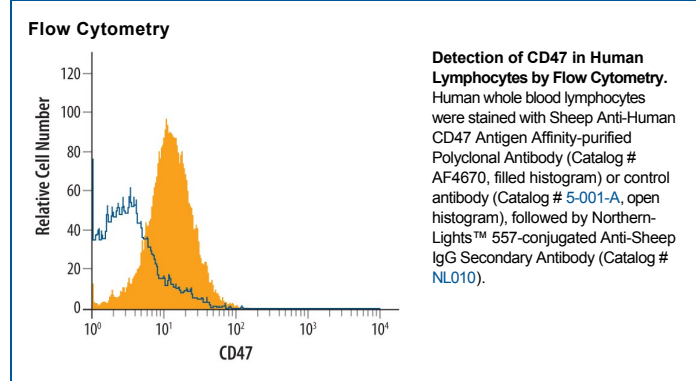
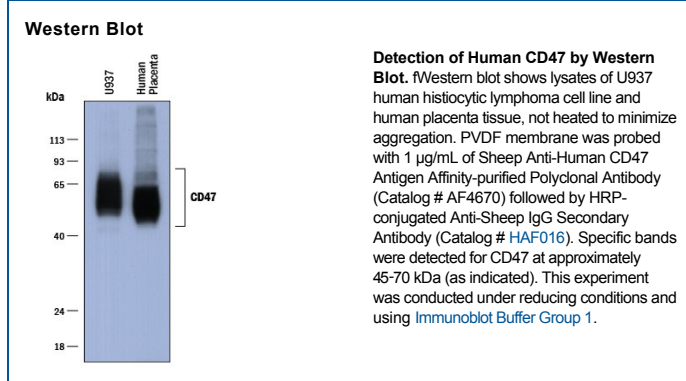
DESCRIPTION	
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CD47 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse CD47 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human CD47 Gln19-Pro139 Accession # Q08722
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<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**

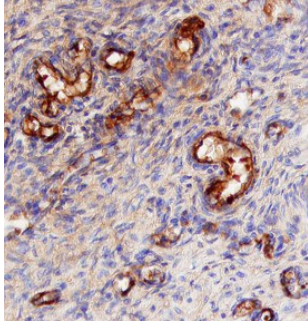
**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	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>Knockout Validated</b>	CD47 is specifically detected in HEK293T human embryonic kidney parental cell line but is not detectable in CD47 knockout HEK293T cell line.	
<b>Neutralization</b>	Measured by its ability to neutralize SIRPα/CD172a-mediated adhesion of human erythrocytes. The adhesion of human erythrocytes to immobilized Recombinant Human SIRPα/CD172a/Fc Chimera (2 µg/mL, 100 µL/well) was maximally inhibited (70-100%) by 2 µg/mL of the antibody.	

**DATA**

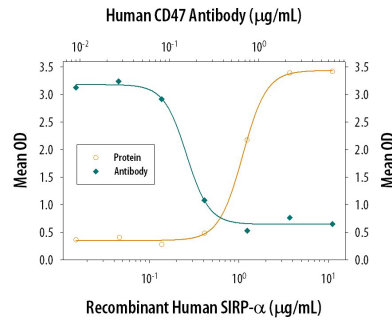


**Immunohistochemistry**



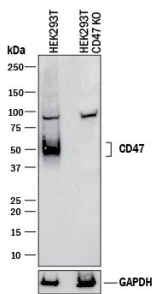
**CD47 in Human Placenta.** CD47 was detected in immersion fixed paraffin-embedded sections of human placenta using 5 µg/mL Sheep Anti-Human CD47 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4670) overnight at 4 °C. Tissue was stained with the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

**Neutralization**



**Cell Adhesion Mediated by SIRPα/CD172a and Neutralization by Human CD47 Antibody.** Recombinant Human SIRPα/CD172a (Catalog # 4546-SA), immobilized onto a microplate, supports the adhesion of the human erythrocytes in a dose-dependent manner (orange line). Adhesion elicited by Recombinant Human SIRP-α (2 µg/mL) is neutralized (green line) by increasing concentrations of Sheep Anti-Human CD47 Polyclonal Antibody (Catalog # AF4670). The adhesion was maximally inhibited (70-100%) by 2 µg/mL of the antibody.

**Knockout Validated**



**Western Blot Shows Human CD47 Specificity by Using Knockout Cell Line.** Western blot shows lysates of HEK293T human embryonic kidney parental cell line and CD47 knockout HEK293T cell line (KO). PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human CD47 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4670) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for CD47 at approximately 50 kDa (as indicated) in the parental HEK293T cell line, but is not detectable in knockout HEK293T cell line. GAPDH (Catalog # AF5718) is shown as a loading control. This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.2 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>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <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 integrin-associated protein/IAP and OA3) is a variably glycosylated, 40-60 kDa atypical member of the Ig-Superfamily. It is expressed on almost all cell types, including erythrocytes. CD47 binds to TSP-1 and SIRPα, and forms a membrane complex with CD36 and α<sub>v</sub>β<sub>3</sub>. Mature human CD47 is a 305 amino acid (aa), five-transmembrane glycoprotein. It contains a 123 aa extracellular region (aa 19-141) that is characterized by the presence of a V-type Ig-like domain (aa 19-127), and a 34 aa C-terminal cytoplasmic tail that interacts with Giα subunits. Three splice variants occur over aa 293-323. Over aa 19-139, human CD47 shares 61%, 71% and 66% aa identity with mouse, porcine and canine CD47, respectively.