

# Product Data Sheet

## Purified anti-human CD172a/b (SIRP $\alpha/\beta$ )

**Catalog # / Size:** 323801 / 25  $\mu$ g  
 323802 / 100  $\mu$ g

**Clone:** SE5A5

**Isotype:** Mouse IgG1,  $\kappa$

**Immunogen:** NIH-3T3/hu-SIRP $\alpha$  cell line

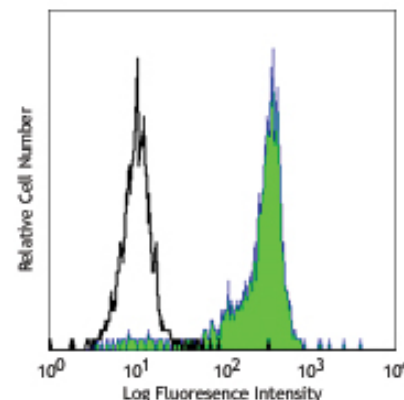
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.

**Concentration:** 0.5 mg/ml

**Storage:** The antibody solution should be stored undiluted at 4°C.



Human peripheral blood monocytes stained with purified SE5A5, followed by anti-mouse-IgG FITC

## Applications:

**Applications:** FC - Quality tested

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For immunofluorescent staining, the suggested use of this reagent is  $\leq 2.0$   $\mu$ g per million cells in 100  $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.

**Application Notes:** Clone SE5A5 recognizes a common epitope on SIRP $\alpha$  (90 kD) and SIRP $\beta$  (50 kD).<sup>3</sup> A high degree of homology has been found between SIRP family isoforms alpha and beta at the level of extracellular domains. Consequently, many anti SIRP antibody clones, such as SE5A5, have been reported to cross react with several SIRP isoforms.<sup>4,5,6</sup> It reacts with CD172a and has weak cross-reaction with CD172b. This antibody is able to block the binding of SIRP $\alpha$  (SIRP $\alpha$ 1 and SIRP $\alpha$ 2) to CD47.

**Application References:**

1. Seiffert M, *et al.* 1999. *Blood* 94:3633.
2. Dubois NC, *et al.* 2011. *Nat. Biotechnol.* 29:1011.
3. Barros MM, *et al.* 2009. *Transfusion* 49:154.
4. Liu Y, *et al.* 2005. *J. Biol. Chem.* 280:36132.
5. Seiffert M, *et al.* 1999. *Blood* 94:3633.
6. Barclay AN. 2009. *Curr. Opin. Immunol.* 21:47.

**Description:** CD172a, also known as signal-regulatory protein  $\alpha$  (SIRP $\alpha$ ), src homology 2 domain-containing phosphatase substrate-1 (SHPS1), PTPNS1, BIT, MFR, and P84, is a 75-110 kD transmembrane glycoprotein involved in receptor tyrosine kinase coupled signaling pathway. It belongs to the Ig superfamily and is primarily expressed on monocytes/macrophages, granulocytes, dendritic cells, and neurons. CD172a serves as a substrate of activated receptor tyrosine kinases (RTKs). The interaction of CD172a intracellular domain with SHP-1 and SHP-2 displays negative signaling in the regulation of leukocyte adhesion and transmigration, T cell activation, macrophage fusion, and phagocytosis. CD47 (IAP) is the extracellular ligand for CD172a. SIRP $\alpha$  was recently demonstrated to be a specific marker for cardiomyocytes derived from human pluripotent stem cells.<sup>2</sup>

**Antigen References:**

1. Seiffert M, *et al.* 1999. *Blood* 94:3633.
2. Seiffert M, *et al.* 2001. *Blood* 97:2741.
3. Timms JF, *et al.* 1998. *Mol. Cell Biol.* 18:3838.
4. Barclay AN and Brown MH. 2006. *Nat. Rev. Immunol.* 6:457.

### Related Products:

**Product**  
 Purified Mouse IgG1,  $\kappa$  Isotype Ctrl  
 APC Goat anti-mouse IgG (minimal x-reactivity)  
 PE Goat anti-mouse IgG (minimal x-reactivity)  
 Cell Staining Buffer

**Clone**  
 MOPC-21  
 Poly4053  
 Poly4053

### Application

FC, ICFC, ICC, IF, IHC, IP, WB  
 FC  
 FC  
 FC, ICC, ICFC



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