

PE/Cy7 anti-human CD172a/b (SIRP α / β)

Catalog # / Size: 2219040 / 100 tests
2219035 / 25 tests

Clone: SE5A5

Isotype: Mouse IgG1, κ

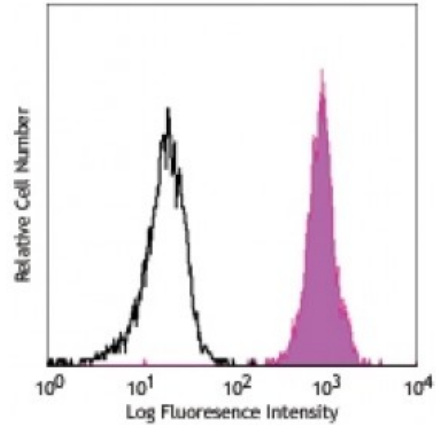
Immunogen: NIH-3T3/hu-SIRP α cell line

Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with PE/Cy7 under optimal conditions. The solution is free of unconjugated PE/Cy7 and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

Concentration: Lot-specific



Human peripheral blood granulocytes stained with SE5A5 PE/Cy7

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 microL to 5 microL per test.** Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 microL staining volume or per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Clone SE5A5 recognizes a common epitope on SIRP α (90 kD) and SIRP β (50 kD)³. A high degree of homology has been found between SIRP family isoforms α and β 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^{1,4,5}. It reacts with CD172a and has weak cross-reaction with CD172b. This antibody is able to block the binding of SIRP α (SIRP α 1 and SIRP α 2) to CD47^{1,6}.

- 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. Barclay AN. 2009. *Curr. Opin. Immunol.* 21:47.
 6. Florian S, *et al.* 2005. *J. Leukoc. Biol.* 77:984.

Description: CD172a, also known as signal-regulatory protein α (SIRP α), 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 α was recently demonstrated to

be a specific marker for cardiomyocytes derived from human pluripotent stem cells².

**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*