

APC/Cyanine7 anti-human CD172a/b (SIRP α / β)

Catalog # / Size: 2219105 / 25 tests

Clone: SE5A5

Isotype: Mouse IgG1, κ

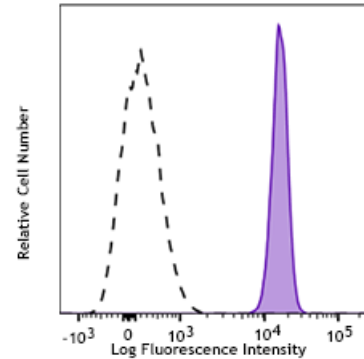
Immunogen: NIH-3T3/hu-SIRP α cell line

Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with APC/Cyanine7 under optimal conditions.

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 were stained with CD172a/b (SIRP α / β) APC/Cyanine7 (clone SE5A5) (filled histogram) or mouse IgG1, κ APC/Cyanine7 isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L 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 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^{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. Immunol.* 6:457.